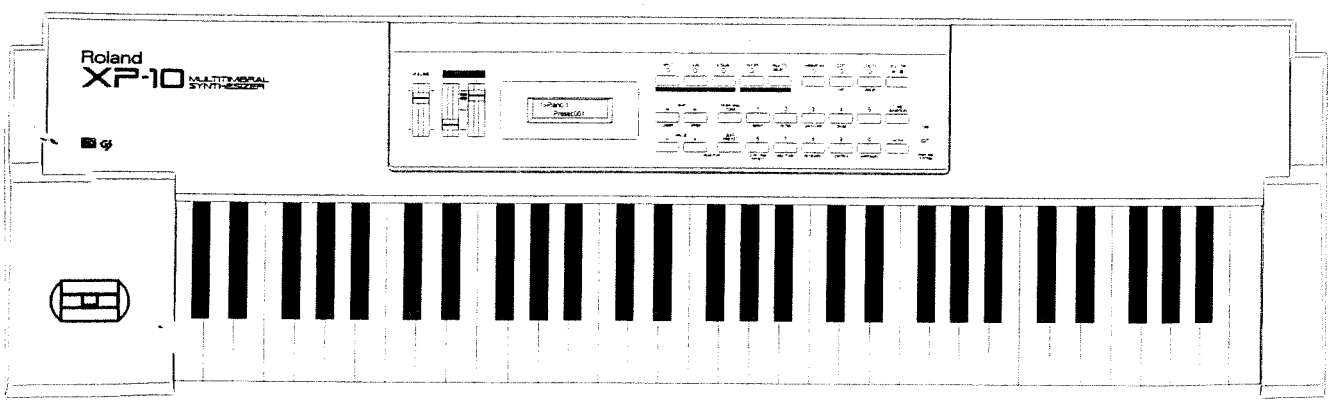
GENERAL MIDI

Roland®

MULTITIMBRAL SYNTHESIZER

XP-10

OWNER'S MANUAL



Introduction/Main Features

Introduction

Thank you for purchasing the Roland XP-10 Multitimbral Synthesizer. The wide variety of high-quality sounds and easy operation of the XP-10 will satisfy all musicians from beginners to professionals. The multitimbral functionality of the XP-10 also makes it easy for you to enjoy ensemble playing.

Before using this unit, carefully read the section entitled: "Important Notes" (p. 5). This section provides important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, this manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

Main Features

High-Quality Sounds

A wide variety of preset Tones and Drum Sets are provided, ranging from realistic acoustic sounds to synth sounds appropriate for solos. The XP-10 is ideal for all types of music.

28-Voice / 16-Part Multitimbral

The XP-10 is a 16-part multitimbral synthesizer that is able to produce up to 28 notes simultaneously. When used in conjunction with a sequencer or computer, the XP-10 provides the freedom you need for creating and performing music.

General MIDI System / GS Format Compatible

The XP-10 is compatible with the General MIDI System and the GS Format. Music data in compliance with the General MIDI System / GS Format can be played back on a sequencer or computer to play the XP-10.

Built-In Arpeggiator

The XP-10's arpeggiator function allows you to produce arpeggios (broken chords) simply by playing a chord in the keyboard. The pattern can be changed in realtime using the slider or pitch bender. The tempo of the arpeggio can also be synchronized to a sequencer, etc.

Combination Palette Function

Two sliders provide a variety of control over functions ranging from the sound source to the arpeggiator, allowing you to add expressiveness to your performances.

Four Keyboard Modes

Four keyboard modes are provided; Single, Dual, X-dual, and Split. From soloing to backing, the XP-10 has the keyboard mode that is just right for your situation. Keyboard modes also provide flexibility for sound creation.

A New Type of Modulation Lever

A new type of moduration lever allows a wide range of expressive control, from delicate nuances to bold effects.

Performance Functions Suitable for Live Playing

Settings such as Tones and levels for each Part, the Keyboard Mode, and arpeggiator settings can be stored in one of the 64 Performance sets. In a live performance situation, Performances can be selected to instantly change your entire setup.

Simple User Interface

The XP-10 features an easily understood panel layout and dedicated buttons and sliders for functions, ensuring easy and quick operation.

Computer Interface Connector

A special computer cable makes it easy for you to connect the XP-10 to your computer, so that you can enjoy ensemble playing.

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How to read this manual and use the XP-10

Broadly speaking, there are three ways to use the XP-10, and this will affect the way that you read this manual.

Playing the XP-10 by itself

Read chapters 1 to 5 of this manual in sequence. As necessary, you can also read chapters from 9 to 12.

Using a sequencer with the XP-10 to enjoy ensemble playing

First, read chapters 1 to 5 which explain how to use the XP-10 itself. Then read chapters 6 and 7 which explain how to use the XP-10 with a sequencer. As necessary, you can also read chapters from 9 to 12.

* If you will be using the XP-10 together with other MIDI sound sources, it is not necessary to read all of chapter 7. Read only the section in chapter 7 entitled "Adding other MIDI sound sources. (p.48)"

Using a computer with the XP-10 to enjoy ensemble playing

First, read the manual for your sequencing software, to understand installation procedure and operation. Next, read chapters 1 to 5 which explain how to use the XP-10 itself. Then, read chapters 6 and 8 in this manual to understand how the XP-10 can be used in conjunction with a computer. Chapter 7 explains connections with a sequencer, but you should read chapter 7 after you read chapters 6 and 8. As necessary, you can read chapters from 9 to 12 as well.

Conventions in this manual

In order to present information as clearly as possible, the following printing conventions are used in this manual.

1. Characters and numerals enclosed in square brackets [ ] indicate buttons on the XP-10's panel. For example, [ENTER] indicates the Enter button, and [1] indicates the numeric key 1.

2. PART[◀]/[▶] or VALUE[-]/[+] etc. indicate that you should press one or the other button.

3. References to explanations on other pages are indicated by (p.**).

The General MIDI System and GS Format

What is the General MIDI System?

The General MIDI System is a universal set of specifications for sound generating devices. These specifications seek to allow for the creation of music data which is not limited to equipment by a particular manufacturer or to specific models.
The General MIDI System defines things such as the minimum number of voices that should be supported, the MIDI messages that should be recognized, which sounds correspond to which Program Change numbers, and the layout of rhythm sounds on the keyboard. Thanks to these specifications, any device that is equipped with sound sources supporting the General MIDI System will be able to accurately reproduce General MIDI Scores (music data created for the General MIDI System), regardless of the manufacturer or model.

What is the GS Format?

The GS Format is a standardized set of specifications for Roland's sound sources which defines the manner in which multitimbral sound generating units will respond to MIDI messages. The GS Format also complies with the General MIDI System. The GS Format also defines a number of other details. These include unique specifications for sounds and the functions available for Tone editing and effects (chorus and reverb), and other specifications concerning the manner in which sound sources will respond to MIDI messages. Any device that is equipped with GS Format sound sources can faithfully reproduce GS Music Data (music data created under the GS Format).
This product supports both General MIDI and GS. Music data which carries either of these logos can be accurately reproduced.

* GS (GS) is a registered trademark of Roland Corporation.
* Apple is a registered trademark of Apple Computer, Inc., U.S.A.
* Macintosh is a trademark of Apple Computer, Inc., U.S.A.
* IBM is a registered trademark of International Business Machines Corporation, U.S.A.
* IBM PC/AT is a registered trademark of International Business Machines Corporation, U.S.A.

Important Notes

Be sure to use only the AC adaptor supplied with the unit. Use of any other AC adaptor could result in damage, malfunction, or electric shock.

Power Supply

• Before connecting this unit to other devices, turn off the power to all units; this will help prevent damage or malfunction.
• Do not use this unit on the same power circuit with any device that will generate line noise; an electric motor or variable lighting system for example.
• The power requirement for this unit is indicated on its nameplate (rear panel). Ensure that the voltage in your installation meets this requirement.
• Avoid damaging the power cord: do not step on it, place heavy objects on it, etc.
• When disconnecting the AC adaptor from the power outlet, grasp the plug itself; never pull on the cord.
• If the unit is to remain unused for an extended period of time, unplug the power cord.

Placement

• Do not subject the unit to temperature extremes (eg., direct sunlight in an enclosed vehicle). Avoid using or storing the unit in dusty or humid areas, or areas that are subject to high levels of vibration.
• Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum.
• This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
• Do not expose the unit to temperature extremes or install it near devices that radiate heat. Direct sunlight in an enclosed vehicle can deform or discolor the unit.

Maintenance

• For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
• Never use benzene, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Additional Precautions

• Protect the unit from strong impact.
• Do not allow objects or liquids of any kind to penetrate the unit. In the event of such an occurrence, discontinue use immediately. Contact qualified service personnel as soon as possible.
• Never strike or apply strong pressure to the display.
• Should a malfunction occur, or if you suspect there is a problem, discontinue use immediately. Contact qualified service personnel as soon as possible.
• A small amount of noise may be heard from the display during normal operation.
• To avoid the risk of electric shock, do not open the unit or its AC adaptor.

Memory Backup

• This unit contains a battery which powers the unit's memory circuits while the main (AC) power is off. The expected life of this battery is 5 years or more. However, to avoid the untimely loss of memory data, it is strongly recommended that you change the battery every 5 years. Please be aware that the actual life of the battery will depend upon the physical environment — especially the temperature — in which the unit is used. When it is time to change the battery, consult with qualified service personnel.
• When the battery becomes weak the following message will appear in the display: "Battery Low!". Please change the battery as soon as possible to avoid the loss of memory data.
• Please be aware that the contents of memory may at times be lost; when the unit is sent for repairs or when by some chance a malfunction has occurred. Important data should be stored in another MIDI device (eg., a sequencer), or written down on paper (if possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data.

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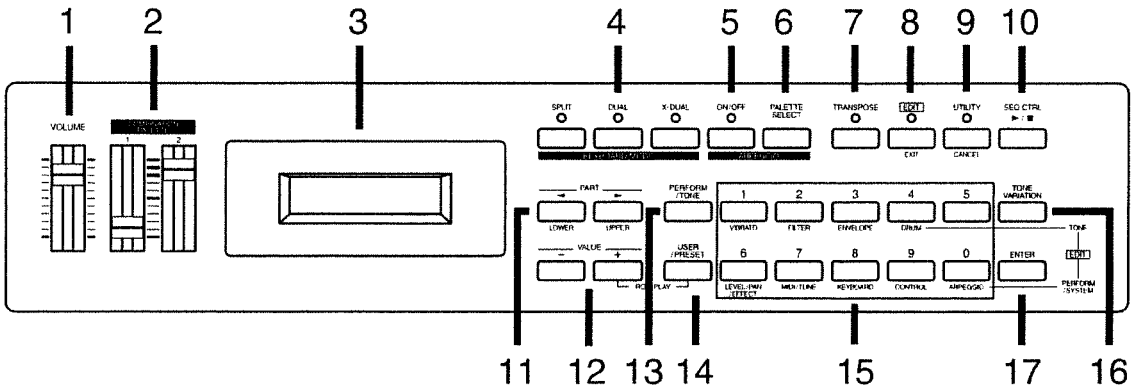
Front panel



1. Volume slider
This adjusts the volume that is output from the output jacks and the headphone jack.

2. Combination palette sliders
These sliders allow you to modify the tone color or arpeggio pattern etc. while you play. You can specify the function of the sliders.

3. Display
This shows the selected Tones and the values of various settings, etc.

4. Keyboard Mode buttons
These buttons select the keyboard mode. The indicator of the selected keyboard mode will light.

5. Arpeggio on/off button
This button turns the arpeggiator on/off.

6. Arpeggio palette select button
Press this button when you wish to use the sliders or pitch bender to modify the arpeggio pattern while you play.

7. Transpose button
This button turns Transpose on/off.

8. Edit button (Exit button)
Press this button when you wish to change various settings.

9. Utility button (Cancel button)
Press this button when you wish to store or initialize various settings. When you have mistakenly entered a value from the numeric keys, this button cancels the input.

10. Sequencer control button
Use this button when a sequencer etc. is connected. Each time you press the button, the sequencer will alternately play back/stop.

11. Part buttons
These buttons select Parts.

12. Value buttons
Use these buttons to select Tones, Drum Sets, or Performances, or to modify various values.

13. Performance/Tone button
This button switches between the Performance Select display and the Tone Select display.

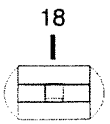
14. User/Preset button
This button switches between User Tones (or Drum Sets or Performances) and Preset Tones (or Drum Sets or Performances).

15. Numeric keys
Use these keys to enter a number when selecting or storing Tones, Drum Sets, or Performances. When editing, these buttons access the function printed below each button.

16. Tone Variation button
When a Preset Tone is selected, and if the Preset Tone has a Variation, this button selects the Variation. If there are two or more Variations, continue pressing the button. If a User Tone is selected, this button switches between USER1/USER2.

17. Enter button
This button is used to finalize the value entered by the numeric keys, or when storing a Tone, Drum Set, or Performance.

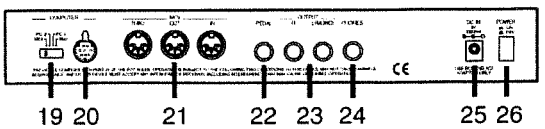
Side panel



18. Pitch Bender/Modulation lever

Use this to raise or lower the pitch of the sound, or add vibrato. This lever can also control many other functions, for example allowing you to modify the tone color or the arpeggio pattern as you play.

Rear panel



19. Computer switch

Set this switch depending on the type of computer connected to the Computer connector, or the software you are using. Turn the power off before changing the setting of this switch. If you wish to use the MIDI connectors, set this switch to MIDI (p.55).

20. Computer connector

A computer can be connected to this connector using a computer cable. The type of cable required will depend on your computer (p.54, p.66). When the Computer switch located at the left is set to MIDI, the Computer connector cannot be used.

21. MIDI connectors

MIDI devices can be connected to these connectors using MIDI cables.

22. Pedal jack

A separately sold expression pedal (EV-5, etc.) or pedal switch (DP-2/6, FS-5U, etc.) can be connected here. A function can be assigned to the connected pedal, for example letting you use the pedal to sustain the sound or modify the tone color.

23. Output jacks

Connect an amp or mixer to these jacks.

24. Headphone jack

A pair of headphones can be connected here. Sound will be output from the output jacks even if headphones are plugged in.

25. AC adaptor jack

Connect the included AC adaptor here.

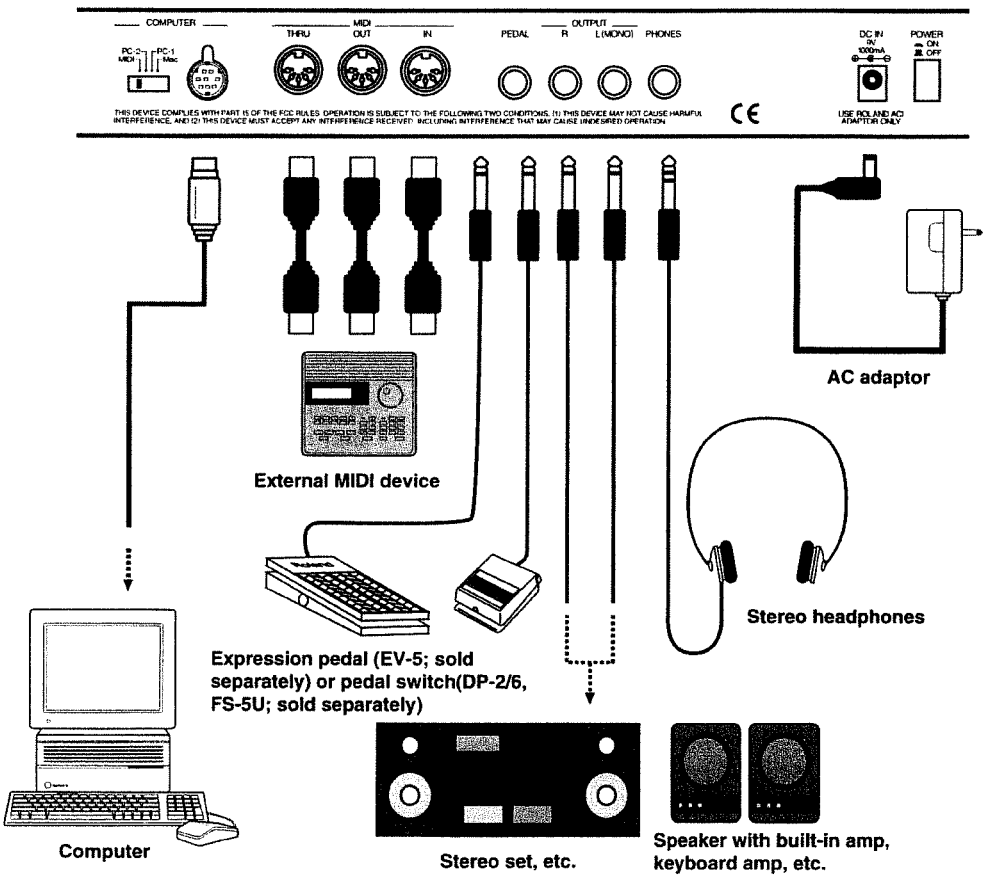
26. Power switch

This switch turns the power on/off.

Chapter 1. Before you play

Connections

In order to play the XP-10, you will need to connect an amp/speaker system. Before making connections, turn off the power of the XP-10 and the amp and mixer. Also be sure to set the volumes of the amp and mixer to the minimum position. This will prevent the speakers from being damaged by noise that may occur when connections are made or when power is turned on.
Refer to the following diagram and connect the XP-10 to the other equipment.



About the AC adaptor jack

Be sure to use only the included AC adaptor. Using any other AC adaptor may result in accidents or malfunctions.

About the output jacks

In order to take full advantage of the XP-10's capabilities, we recommend that you listen to it in stereo. If you are using a mono system, connect the L(MONO) jack.

* Expression pedals and pedal switches are sold separately.
* Use headphones that have a rating of 8–150 ohms.
* Be sure to use expression pedals and pedal switches manufactured by Roland or Boss. Pedals of other manufacturers may not operate correctly with the XP-10.

Turning the power on/off

When you finish making connections, turn the power on using the following procedure.

* Be sure that the volumes of the amp and mixer are turned to the minimum setting. This will prevent the speakers from being damaged by noise that may occur when the power is turned on.

1. Turn on the power of the XP-10.

2. Turn on the power of the mixer and amp etc.

3. Raise the volume controls to an appropriate setting.
Play the keyboard and check that sound is produced.

* The XP-10 contains a protection circuit that inserts a short interval after power is turned on until operation begins.

To turn the power off, reverse the power-on procedure.

* When you turn off the power of the XP-10, the settings you have modified (Performances, Tones, Drum Sets) will be lost. Before you turn the power off, be sure to store your changes. For Performances, refer to "Selecting an entirely different set of XP-10 settings while you play (Performance)" (p.31). For Tones and Drum Sets, refer to Chapter 4. "Creating your own Tone or Drum Set" (p.34).

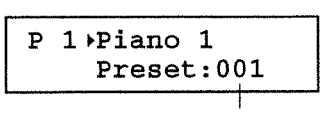
Basic operation

To change a setting, press the appropriate button to view the setting of the desired function. There are two ways to set the value.

Using the numeric keys ([1]—[0]) to select sounds

You can use the numeric keys to select Tones, Drum Sets, and Performances.
Use the numeric keys to specify the number, and press [ENTER] to finalize the number.
The displayed number will stop blinking.
If you enter the wrong number, press [CANCEL] instead of [ENTER]. The original number will reappear, allowing you to re-specify the desired number.

* If you move to a different display when the number is still blinking, the setting will revert to the original number. Be sure to press [ENTER] before moving to a different display.



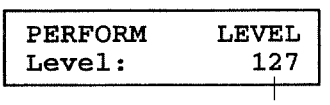
Enter pressed to confirm.
Lights steadily instead of blinking.

* When you have pressed [EDIT] to make various settings, the numeric keys will perform the functions printed below each button.

Using the VALUE[-]/[+] buttons to set a value

You can use VALUE[-]/[+] to select Tones, Drum Sets, and Performances. After pressing [EDIT] to make various settings, use VALUE[-]/[+] to set the value.
Pressing VALUE[-] will decrease the value, and pressing VALUE[+] will increase the value.
Pressing the button once will change the value in steps of one. If you continue holding the button, the value will continue to change.

* Unlike the numeric keys, the value will not blinking.



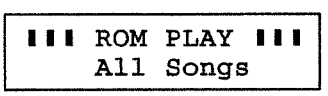
Value in effect

* If you hold down one of the VALUE[-]/[+] buttons and then press the other button, the change begun by the first-pressed button will occur in larger steps. This function is available whenever you use VALUE[-]/[+] to set a value.

Listening to the demo songs

The XP-10 contains four demo songs (ROM Play songs) that demonstrate its capabilities. Here's how to listen to these songs.

1. Simultaneously press VALUE[+] and [USER/PRESET].
The following display will appear.



2. Use VALUE[+]/[-] to select a song.
If you do not select a song, all songs will be played in succession.

3. Press [ENTER] to start playback.

4. Press [ENTER] or [EXIT] to stop playback.

5. To return to being able to play the XP-10 from the keyboard, either simultaneously press VALUE[+] and [USER/PRESET] once again, or press [EXIT].
The display will return to normal.

* While the demo songs are playing back, playing the keyboard will not produce sound. Also, the demo song data will not be transmitted from MIDI OUT.

Song titles and profiles of the composers

Song No. **1** Song Title **POWER**
Music by S. Nakamura Copyright © 1995, Roland

Song No. **2** Song Title **MANGOLAY**
Music by Adrian Scott Copyright ©1995, Adrian Scott

Song No. **3** Song Title **KALEIDOSCOPE**
Music by Christian Salès Copyright © 1995, Christian Salès

Song No. **4** Song Title **KAI STRUTS HIS STUFF**
Music by Chong Lim Copyright © 1995, BMG Publishing

S. Nakamura
Shigekaz is a member of Roland's engineering team. While the brunt of his time has had to be devoted toward development of the company's sound generating hardware, he has also found time to create a significant amount of sound data and numerous demo songs (for the U-20, D-70, JV-80 and JD-990, among others.)

Adrian Scott
Adrian Scott formerly handled the vocals and keyboards for the popular Australian group, "Air Supply." Since following the solo path, he won the Silver Prize at the "World Song Festival Tokyo '84." Currently, he is involved as a producer of commercial music and music for films. In addition, as a session player, he has performed along with a number of Australia's top musicians, including John Farnham and Kylie Minogue. He lives in Melbourne, Australia.

Christian Salès
After studying music at the conservatory, then earning a university degree in electronics & computers, Christian Sales joined Roland in 1989. Nowadays, as a Product Manager in France, he is involved in marketing Roland products. Additionally, he works on musical instrument sound design, and recently created numerous sounds for the JV-1080, XP-50 and Vintage Synth & Dance expansion boards. Morever, Christian often has the opportunity to exhibit his talent as composer/arranger/sound designer in various projects from Multimedia to Dance music.

Chong Lim
Chong Lim is a busy keyboard player, arranger, producer and composer working mainly in the cities of Melbourne and Sydney, Australia. Chong has collaborated with many top international artists including John Farnham, Tina Arena, Jermaine Jackson, Little River Band, Judith Durham, Rick Price, etc. He is also the Musical Director of the top rating live television show "Don't Forget Your Toothbrush." He is actively involved in the composition of soundtrack music for film and television and is a member of Roland's Australian Research and Development Team.

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Adjusting the pitch to other instruments (Tuning)

When playing the XP-10 together with other instruments, the pitch of all instruments must be adjusted to match – otherwise you will be out of tune! In general, the tuning of an instrument is indicated by the pitch in Hertz (Hz) of the middle "A" note. This is known as the "standard pitch." Before you play, set the standard pitch to match the other instruments.

* The process of adjusting the pitch to match the other instruments is known as "Tuning."

Using the following procedure, match the pitch of the middle "A" note on the XP-10 to the other instruments.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "MasterTune."

* If you hold down [ENTER] as you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to set the standard pitch.
Pressing VALUE[+] will raise the pitch of the XP-10.
Pressing VALUE[-] will lower the pitch of the XP-10.

* The normal standard pitch is 440.0 (A4=440.0 Hz).

5. Press [EDIT].
The indicator will go out, and the original display will reappear.

Chapter 2. Playing the XP-10

Trying out the Tones

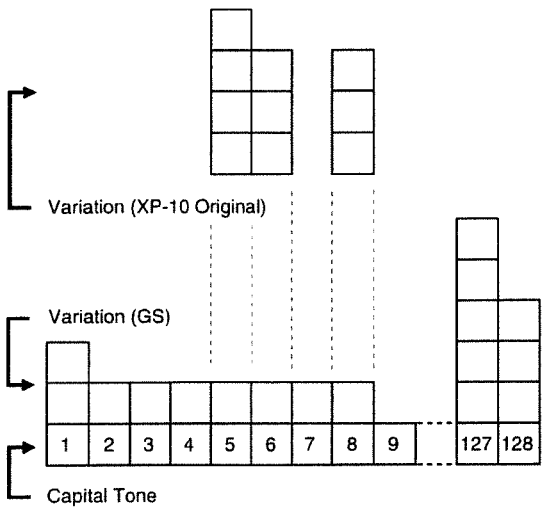
The XP-10 contains many different Tones (sounds). Here's how to select Tones and play them.

Types of Tone

There are two types of Tone.

Preset Tones

A total of 338 Tones (sounds) are preset inside the XP-10. Of these, 128 of the principal Tones are called "Capital Tones." Tones that are similar to a Capital Tone are called "Variations." Some Tones have more than one Variation, and other Tones have no Variations at all. Capital Tones are organized into groups of eight Tones, and there are 16 groups, such as piano, organ, guitar, etc.



* For details on the Tone Groups and the number and name of the Tones, refer to "Tone list" (p.71).
* The Variations of the XP-10 are divided into two types; Tones which are specified by the GS Format and Tones which are original to the XP-10. For details refer to "Tone list" (p.71).

User Tones

These are Tones which can store Preset Tones that you have modified. There are a total of 256 User Tones, organized as Tones 1–128 in User 1, and Tones 1–128 in User 2. With the factory settings, Tones 1–112 in User1 use XP-10 Original Tones, and 113–128 use Capital Tones and modified Preset Tones. User 2 contains Capital Tones of the same number.

* To modify a Tone, refer to Chapter 4 "Creating your own Tone" (p.34).

Selecting a Preset Tone

For details on Tone Groups, and the number and name of the Tones, refer to "Tone list" (p.71).

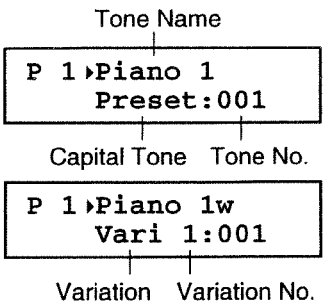
1. Press [USER/PRESET] and select "Preset."

2. Use the numeric keys ([1]–[0]) to specify a Tone number (1–128).
If you press the wrong number, press [CANCEL] and specify the number once again.

* By holding down [ENTER] while you use VALUE[-]/[+], you can jump to the first Tone in each Tone Group.
* You can select Tones using VALUE[-]/[+] instead of the numeric keys. In this case, skip step 3.

3. Press [ENTER] to finalize the selection.

4. If you wish to select a Variation, press [TONE VARIATION].
If there is more than one Variation, repeatedly press [TONE VARIATION]. After each Variation has been selected, you will come back to the Capital Tone.



* If a Capital Tone that has no Variations is selected, pressing [TONE VARIATION] will not change the Tone.

Selecting a User Tone

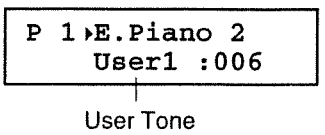
1. Press [USER/PRESET] and select "User."

2. Press [TONE VARIATION] to select either "User1" or "User2."

3. Use the numeric keys ([1]–[0]) to specify the Tone number (1–128).
If you press the wrong number, press [CANCEL] and specify the number once again.

* You can select Tones using VALUE[-]/[+] instead of the numeric keys. In this case, skip step 4.

4. Press [ENTER] to finalize the selection.



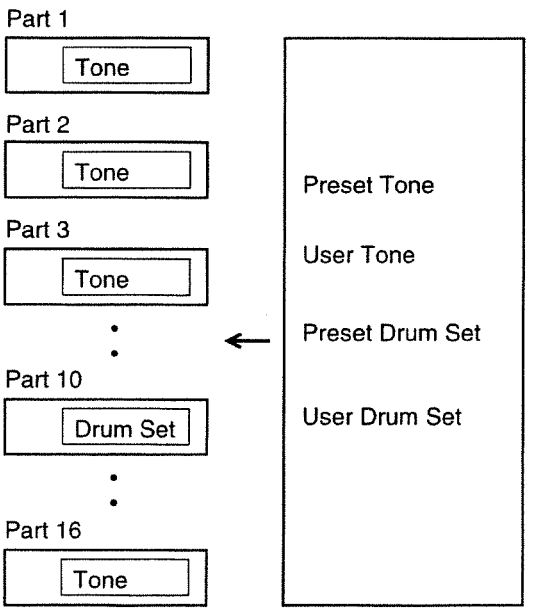
Quick selection of Tones while you play

What is a Part?

The XP-10 has 16 Parts. A "Part" corresponds to a musician playing an instrument, and you can select a different Tone for each Part. By assigning a different Tone to each Part, you can instantly switch Tones simply by selecting a different Part. (This is convenient when you are playing in a live situation, etc.)

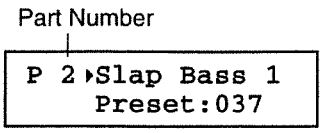
If you use the XP-10 together with a sequencer or with a computer that is running a sequencing software, two or more of these Parts can be used to create an ensemble. (Chapter 6. "Using two or more Parts to create an ensemble (Multitimbal operation)" p.39)

To play the sounds of the XP-10, you need to assign Tones or Drum Sets to Parts. The keyboard and sequencer etc. can play only those sounds which have been assigned to a Part.



Selecting Parts

Press PART[◀]/[▶] to select a Part 1–16.



After selecting a Part, select a Tone (p.16) or Drum Set (p.17) to specify the Tone or Drum Set that the Part will use.

Playing a Drum Set

The XP-10 contains Drum Sets that allow you to play different percussion instruments or sound effects from each key of the keyboard.

Types of Drum Set

As with Tones, there are two types of Drum Set.

Preset Drum Sets

The following 16 Drum Sets are preset inside the XP-10.

1: STANDARD
2: ROOM
3: POWER
4: ELECTRONIC
5: TR-808
6: JAZZ
7: BRUSH
8: ORCHESTRA
9: SFX
10: STANDARD 2
11: STANDARD 3
12: ROOM 2
13: ROCK
14: TR-909
15: DANCE
16: TECHNO

1—9 are Drum Sets defined by the GS Format.
10—16 are the XP-10's original Drum Sets.

For details on the percussion instrument sounds that will be played by each key, refer to "Drum Set list" (p.74).

User Drum Sets

These are Drum Sets which can accommodate Preset Drum Sets that you have modified. The XP-10 contains 20 User Drum Sets. When the XP-10 is shipped, these contain the same data as the Preset Drum Sets.

* For details on modifying a Drum Set, refer to "Creating your own Drum Set" (p.35).

Selecting a Drum Set

With the factory settings, a Drum Set is assigned to Part 10, so use PART[◀]/[▶] to select Part 10 and you can play percussion sounds from the keyboard.

* To play the percussion sounds which are assigned to keys outside of the range of the keyboard, use the Transpose function to shift the range of the keyboard (p.27).

If you want to select a different Drum Set for Part 10, skip steps 1–6 in the following procedure.
If you want to play percussion instruments from another Part, use the following procedure to make settings.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Part," and press [ENTER].

3. Press [9] several times to select "Tone Type."

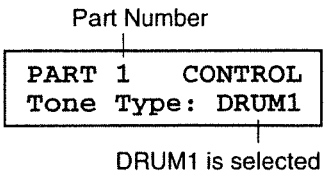
* If you hold down [ENTER] and press [9], you will return to the previous item.

4. Use PART[◀]/[▶] to select the Part to which you want to assign a Drum Set.

* You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

5. Use VALUE[-]/[+] to select either "DRUM1" or "DRUM2."

* To change the settings of other Parts, repeat steps 4–5.



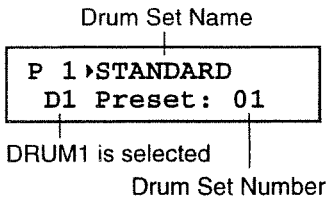
6. Press [EDIT].
The indicator will go off, and the previous display will reappear.

7. Press [USER/PRESET] to choose either "Preset" (Preset Drum Sets) or "User" (User Drum Sets).

8. Use the numeric keys ([1]–[0]) to specify the Drum Set number (Preset 1–16, or User 1–20). If you make a mistake, press [CANCEL] and enter the number once again.

* You may also select Drum Sets using VALUE[-]/[+] instead of the numeric keys. In this case, skip step 9.

9. Press [ENTER] to finalize the selection.

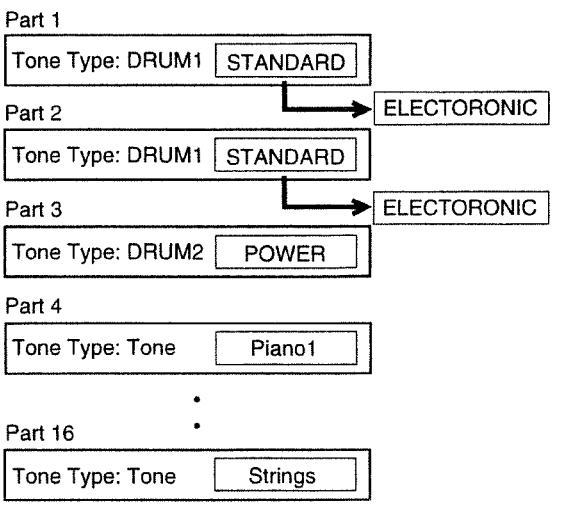


To change back from a Drum Set to a normal sound (Tone), follow steps 1–6, but select "TONE" in step 5.

Notes when selecting a Drum Set

Whether each Part will play a Tone or a Drum Set is determined by the Tone Type selection (TONE/DRUM1/DRUM2) in step 5 of "Selecting a Drum Set."
Up to 2 Drum Sets can be assigned to the Parts. The same Drum Set will be selected for each Part whose Tone Type is set to DRUM1. The same is true for a setting of DRUM2.

Example:
DRUM1 has been specified for Parts 1 and 2, and the STANDARD Drum Set is selected. DRUM2 has been specified for Part 3, and the POWER Drum Set is selected.
In this situation if you change Part 1 from STANDARD to ELECTRONIC, Part 2 will automatically be set to ELECTRONIC.



Playing two Tones from the keyboard (Keyboard Mode)

The XP-10 lets you play two Tones or Drum Sets simultaneously, or play different Tones or Drum Sets with the right and left hands. This is made possible by the Keyboard Mode setting.

What are the Keyboard Modes?

The XP-10 provides the following four Keyboard Modes.

Playing one Tone from the keyboard (Single)

This is the normal playing mode.

Playing two Tones from the keyboard (Dual)

This mode allows you to "layer" two Tones. By setting the two Tones an octave apart you can create richer sounds. ("Setting the transposition for a specific Part (Key Shift)," p.27) By combining Tones in this way, you can create new sounds.

Moving between two Tones as you play (X-dual)

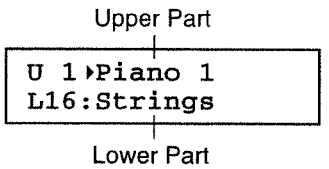
By moving the Combination Palette Slider 1, etc. as you play, you can gradually fade into a different Tone.

Dividing the keyboard between two Parts (Split)

You can divide the keyboard at a specified key (Split Point) so that each area of the keyboard plays a different Tone.

Selecting a Keyboard Mode

To select Dual, X-dual, or Split, press the corresponding button [DUAL], [X-DUAL], or [SPLIT]. The indicator of the selected Keyboard Mode will light.
If you once again press the button whose indicator is lit, the indicator will go off, and you will return to the normal playing mode (Single).
When you select Dual, X-dual, or Split, the display will be as follows. These Keyboard Modes use two Parts. The Part displayed in the upper line is called the "Upper Part" and the part displayed in the lower line is called the "Lower Part."



In Dual mode, the Tones of the Upper Part and the Lower Part will sound simultaneously.
In X-dual mode, moving the Combination Palette Slider 1 away from you will cause the sound to gradually fade from the Tone of the Lower Part to the Tone of the Upper Part.
To see how this works, refer to the following section "Selecting Tones and Drum Sets" and combine the Cello (Preset: 43) and the Trombone (Preset: 58) Tones. This will help you understand how X-dual works.

* You may also use an expression pedal or Combination Palette Slider 1 as the X-dual controller (p.20).

In Split mode, the upper area of the keyboard (including the Split Point) will play the Tone of the Upper Part, and the lower area of the keyboard will play the Tone of the Lower Part.

Selecting Tones and Drum Sets

To select a different Tone or Drum Set when using a keyboard mode other than Single, use the following procedure.

1. Use PART[◀]/[▶] to move the cursor ▶ to the Part for which you want to select a Tone or Drum Set.

2. Use the numeric keys ([1]–[0]) to select a Tone or Drum Set ("Selecting a Preset Tone" p.16, "Selecting a User Tone" p.16, "Selecting a Drum Set" p.18).

* The number of the Tone or Drum Set will not appear in the display.
* Instead of the numeric keys, you can also select Tones and Drum Sets using VALUE[-]/[+]. In this case, skip step 3.

3. Press [ENTER] to finalize the selection.

Selecting Parts

Keyboard Modes other than Single mode use two Parts (Upper and Lower). You can select which of the 16 Parts will be the Upper Part and which will be the Lower Part.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [8] several times to select "Upper Part" or "Lower Part."

* If you hold down [ENTER] as you press [8], you will return to the previous item.

4. Use VALUE[-]/[+] to specify the Part (1–16).

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

About the Part played by the keyboard in Single Mode

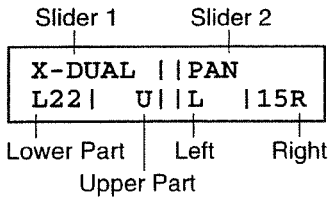
The section "Selecting Parts" (p.17) in "Quick selection of Tones while you play" explained how to select the Part being played by the keyboard. When the Keyboard Mode is Single, the Upper Part will be played by the keyboard.

* When the Keyboard Mode is Single, using PART [◄]/[►] to switch Parts will modify the value of "Upper Part." If after switching Parts, you change the Keyboard Mode from Single to Dual etc., the setting of "Upper Part" that you selected as explained in this "Selecting Parts" will also be changed. In this case, you will need to set the "Upper Part" once again.

Changing the X-dual controller

In addition to the Combination Palette Slider 1, X-dual can also be controlled by an expression pedal (sold separately: EV-5 etc.) or by Modulation Lever. Slider or Expression Pedal is convenient when you want to play a mixture of the two Tones.
If Slider is selected, Slider 1 will control X-dual and Slider 2 will control Pan (stereo position). As you move Slider 2 away from you, the stereo position of the two Tones will move from L to R.
If Pedal is selected, you will need to connect an expression pedal (sold separately: EV-5 etc.) to the XP-10. It is not possible to use a pedal switch (sold separately: DP-2/6, FS-5U etc.) to play a mixture of the two Tones.

* If you have selected Slider to control X-dual, the function (X-DUAL for slider 1, PAN for slider 2) and current value of each slider will be displayed after you set the Keyboard Mode to X-dual. This display will also appear while you are moving the sliders.



* The function and current value of each slider will also be displayed for several seconds when you switch the Keyboard Mode to a mode other than X-dual.

* These sliders do not always control X-dual and Pan. Their function changes depending on the status of the XP-10. For details refer to "About the XP-10's controllers" (p.30).

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [9] several times to select "X-DUAL Ctrl."

* If you hold down [ENTER] as you press [9], you will return to the previous item.

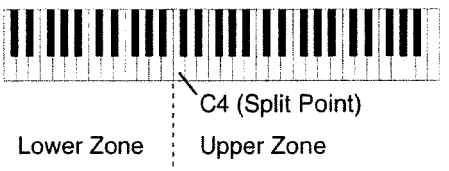
4. Use VALUE[-]/[+] to select the controller (PEDL, MOD, SLDE).

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

A quick way to change the X-dual controller
Hold down [X-DUAL] and press [EDIT] to jump directly to the "X-DUAL Ctrl" page. Make settings as explained in steps 4–5 of the above procedure.
If you wish to quickly change the X-dual controller, you can also hold down [X-DUAL] and press VALUE[-]/[+] to modify only the "X-DUAL Ctrl" setting. When you release [X-DUAL], the previous display will reappear.

Setting the Split Point

The Split Point can be set in the range of C2–C#7.



1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [8] several times to select "Split Point."

* If you hold down [ENTER] as you press [8], you will return to the previous item.

4. Use VALUE[-]/[+] to set the Split Point (C2–C#7).

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

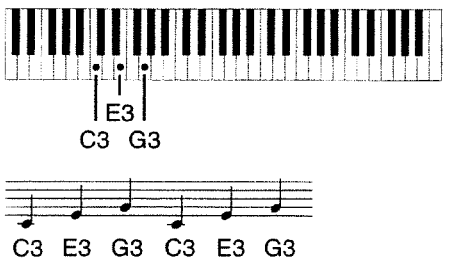
A quick way to change the Split Point
Hold down [SPLIT] and press [EDIT] to jump directly to the "Split Point" page. Make settings as in steps 4–5 above.
You can also quickly change the Split Point by holding down [SPLIT] and using VALUE[-]/[+] to modify just the "Split Point" setting. When you release [SPLIT], the previous display will reappear.

About maximum polyphony

The XP-10 is able to play up to 28 notes (28 voices) simultaneously. However some Tones use 2 voices to create a single Tone. Each note played on such a Tone will use up not 1 but 2 voices of the available polyphony. Also, when you use a Keyboard Mode such as Dual, 2 Tones will sound simultaneously, which means that the number of simultaneous notes will be affected in the same way. For the number of voices used by each Tone, refer to "Tone list" (p.71).

Turning a chord into an arpeggio

The XP-10's arpeggiator lets you produce an arpeggio (broken chord) simply by playing a chord. For example if you play a C Major chord as shown below, an arpeggio of C3, E3, G3, C3, E3, G3 ... will be produced.



When the Keyboard Mode is Single/Dual/X-dual, arpeggios can be played in all areas of the keyboard.
When the Keyboard Mode is Split, chords played in the Lower area of the keyboard will be sounded as arpeggios.
If you connect a pedal switch (sold separately: DP-2/6, FS-5U etc.) and set "PEDAL Asgn" to HOLD (refer to "Using a pedal to modify the sound" p.29), chords played while you press the pedal will continue being played as an arpeggio even if you release the chord. To play another chord, release and then press the pedal once again, and play the next chord.

* Arpeggios can be produced only by playing the XP-10's keyboard. It is not possible to produce arpeggios with Note messages from MIDI IN.

Turning the arpeggiator on/off

Each time you press [ON/OFF], the arpeggiator will be switched on/off.
When this is turned on, the button indicator will light, and an arpeggio will be played when you play a chord on the keyboard.

Creating an arpeggio pattern

There are a total of 11 parameters that can be set for the arpeggiator, but the most important is the "Arpeggio Style" setting. The arpeggio pattern is largely determined by this setting.
When you select an arpeggio style, the four parameters marked by an asterisk (*) in the list below will be set automatically. This allows you to call up the most appropriate pattern simply by selecting the arpeggio style. After selecting the arpeggio style, you can set Tempo and Octave Range etc. as appropriate. Normally you will specify the pattern in this way.
If this selection is not enough to obtain the pattern you want, modify the settings of the four parameters marked by an asterisk (*) as desired.

* Of these four parameters, the options for "the order in which the chord notes sound (Motif)" and "beat pattern (Beat Ptrn)" will depend on the arpeggio style that is selected.

Arpeggiator parameters you can set

Arpeggio style (Style)
This sets the style of the arpeggio. Select from the following 29 possibilities.

Settings:
1/4, 1/6, 1/8, 1/12, 1/16, 1/32
Select the note timing interval.

1/4	♩	Quarter note
1/6	♩³	Quarter note triplet
1/8	♪	8th note
1/12	♪³	8th note triplet
1/16	𝅘𝅥𝅯	16th note
1/32	𝅘𝅥𝅰	32nd note

GLISSANDO
Glissando style.
SEQUENCE A–C
Styles similar to a sequence pattern.
ECHO
Echo-type style.
WALTZ, SWING WALZ
Triple-meter styles.
SYN BASS, HEAVY SLAP, LIGHT SLAP, WALK BASS
Styles suitable for playing a bass part.
SINGL CUT'N, CHRD CUT'N, STRM CUT'N
Styles for guitar cutting. CHRD/STRM is effective when 3 or 4 notes are held.
REGGAE
Reggae-type style. Effective when 3 notes are held.
PIANO PKNG, CLAVI CHRD
Keyboard instrument backing styles.
PERCUSSION
A style suitable for percussion instrument sounds.
STRUMMING
A style simulating an upward (downward) chord strum on a guitar. Effective when 5 or 6 notes are held.
HARP
A style simulating harp playing.
SHAMISEN
A style simulating shamisen playing
BOUND BALL
A style similar to a bouncing ball.
RANDOM
Notes will sound in random order.
LIMITLESS
Settings for parameters marked "*" can be freely set in any combination and stored.

Arpeggio note order (Motif) *
This sets the order in which the notes of the chord will be played.

* The available choices will depend on the selected Arpeggio Style. For the options of each style, refer to "Arpeggio Style list" (p.78).

Settings:
SINGLE UP
Notes will sound singly, starting from the lowest of the keys pressed.
SINGL DOWN
Notes will sound singly, starting from the highest of the keys pressed.
SNGL UP&DW
Notes will sound singly, starting from the lowest of the keys pressed, going up and then back down.
SNGL RANDM
Notes will sound singly in random order.
DUAL UP
Notes will sound in pairs, starting from the lowest.
DUAL DOWN
Notes will sound in pairs, starting from the highest.
DUAL UP&DW
Notes will sound in pairs, starting from the lowest of the keys pressed, going up and then back down.
DUL RANDOM
Notes will sound in pairs, in random order.
NOTE ORDER
Notes will be sounded in the order that they were pressed. By pressing keys in the appropriate order, you can create melody lines. Up to 128 notes can be remembered.
GLISSANDO
Notes will be played in an ascending and descending chromatic scale between the lowest and the highest keys that are pressed. You need press only two notes, the lowest and the highest.
CHORD
All notes that are pressed will be sounded simultaneously.
BAS+CHORD1–5
The arpeggiator will sound the lowest note that is pressed, and the other notes as a chord.
BASS+UP1–8
The arpeggiator will sound the lowest note that is pressed, and the other notes as an arpeggio.
BASS+RND1–3
The arpeggiator will sound the lowest note that is pressed, and the other notes randomly.
TOP+UP1–6
The arpeggiator will sound the highest note that is pressed, and the other notes as an arpeggio.

Beat Pattern (Beat Ptrn) *
This sets the beat pattern. This setting will affect the location of the accent and the length of the notes, thus determining the beat (rhythm).

* The available settings will depend on the currently selected arpeggio style. For the settings available in each style, refer to "Arpeggio Style list" (p.78).

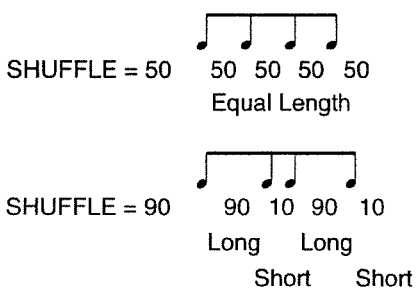
Settings:
1/4, 1/6, 1/8, 1/12, 1/16 1–3, 1/32 1–3, SEQ-A1–6, SEQ-B1–4, SEQ-C1–2, ECHO1–3, MUTE01–12, CUT1–2, REGGAE, REF1–2, PERC1–4, WALKBS, STRUM1–2, HARP, BOUND, RANDOM.

Tempo
Settings: 20–250
This sets the speed of the arpeggio.

Octave Range
Settings: -3–+3
This sets the range in octaves over which arpeggiation will take place. If you want the arpeggio to sound using only the notes that you actually play, set this to 0. You can use the Pitch Bender to control the Octave Range while you play. ("Changing the arpeggiator pattern while you play" p.24)

Velocity of arpeggio notes (Key Velo)
Settings: 1–127, REAL
This sets the force of the chord. When REAL is selected, the velocity at which the notes were actually played will be used. With a setting of 1–127, the specified velocity value will be used.

Shuffle Rate *
Settings: 50–90%
This allows you to modify the timing of the arpeggio notes to create shuffle rhythms. With a setting of 50% the notes will be spaced evenly. As the value is increased, the note timing will have more of a "dotted" (shuffle) feel.



* If the Beat Pattern is 1/4, there will be no shuffle effect even if the Shuffle Rate value is increased.

Groove Rate *
Settings: 0–100%
This modifies the strength of accents and the length of the notes to adjust the "groove" feel of the arpeggio. A setting of 100% will result in the most pronounced groove feel.

Slider 1 function (Slider 1)
Settings: INT TMPO, SHUFFL R, GROOVE R
This sets the function that will be assigned to Combination Palette Slider 1 so that you can modify the arpeggio pattern as you play. ("Changing the arpeggiator pattern while you play" p.24)

Slider 2 function (Slider 2)
Settings: INT TMPO, SHUFFL R, GROOVE R
This sets the function that will be assigned to Combination Palette Slider 2 so that you can modify the arpeggio pattern as you play. ("Changing the arpeggiator pattern while you play" p.24)

Synchronization source (Sync Source)
This specifies how the tempo of the arpeggio will be determined.
Settings:
INT The Tempo and Beat Ptrn settings will control the arpeggio.
MIDI MIDI Clock messages received by the XP-10 from an external device (sequencer etc.) and the Beat Ptrn setting will control the arpeggio.

* MIDI Clock is a message used to synchronize MIDI devices connected by a MIDI cable. If the XP-10 is connected to a MIDI device such as a sequencer, you can set the Sync Source setting to MIDI so that the arpeggio will play in synchronization with the sequencer playback. ("What is MIDI?" p.39)

Changing the arpeggiator pattern

By changing the arpeggiator settings you can create arpeggios with various patterns.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [0] several times to select the function whose setting you wish to change.

* If you hold down [ENTER] as you press [0], you will return to the previous item.

4. Use VALUE[-]/[+] to set the value.

* If you wish to make settings for other functions, repeat steps 3–4.

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

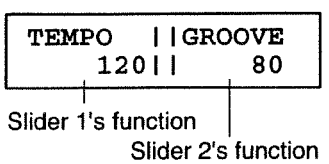
A quick way to access the arpeggiator page
Hold down [ON/OFF] and press [EDIT] to jump directly to the arpeggiator page. Use steps 3–5 to make settings.
Also, you can quickly change arpeggio styles by holding down [ON/OFF] and pressing VALUE[-]/[+] to modify just the "Style" setting. When you release [ON/OFF], the previous display will reappear.

Changing the arpeggiator pattern while you play

If you press [PALETTE SELECT] (the arpeggio [ON/OFF] indicator will change to blinking), you can use the Combination Palette Sliders and the Pitch Bender to change the arpeggio pattern while it is playing.

Combination Palette Sliders 1/2 will control the function assigned to them by the Slider 1/ Slider 2 setting ("Arpeggiator parameters you can set" p.21). For example by moving a slider away from you, the Tempo from 20 to 250, or the Groove Rate could be gradually changed from 0 to 100.

* When you press [PALETTE SELECT] so that the sliders can be used to control the arpeggio pattern, the function and current value of each slider (Slider 1 = Tempo, Slider 2 = Groove Rate, etc.) will appear in the display for several seconds. This display will also appear whenever you move the sliders.



* When you press [PALETTE SELECT] again so that the sliders will no longer control the arpeggio pattern, the function and value of each slider will again be displayed for a few seconds.

* The sliders do not always control the arpeggio pattern, but will function differently depending on other settings. For details refer to "About the XP-10's controllers" (p.30).

Using the Pitch Bender you can also modify the Octave Range setting explained in "Arpeggiator parameters you can set" (p.21).

When the Pitch Bender is in the center position, the arpeggio will be played in the specified Octave Range. If the Pitch Bender is moved to the far left, -3 will be added to the Octave Range. For example if the Octave Range is +1, moving the Pitch Bender to the far left will result in an Octave Range setting of -2.

If the Pitch Bender is moved to the far right, +3 will be added to the Octave Range. For example if the Octave Range is +1, moving the Pitch Bender to the far right will result in an Octave Range setting of +4.

1. Press [ON/OFF].
The indicator will light, and arpeggios can be played.

2. Press [PALETTE SELECT].
The [ON/OFF] indicator will blink at the tempo of the arpeggio.
While the indicator is blinking, you can use the sliders or pitch bender to modify the arpeggio pattern.

* For several seconds after the [PALETTE SELECT] is pressed, the display will show the function and value of the sliders.

3. Each time you press [PALETTE SELECT], the [ON/OFF] indicator will alternate between lit and blinking.
While the indicator is lit, the sliders and pitch bender will function as follows.

If the sliders are set to control X-dual as explained in chapter 2 "Changing the X-dual controller" (p.20) and you press [X-DUAL] to select X-dual, they will control X-dual. If another controller has been selected to control X-dual, the sliders will control the function that was selected as explained in chapter 3 "Using the Combination Palette Sliders to modify the sound" (p.30).

The Pitch Bender will modify the pitch of the sound ("Raising and lowering the pitch in realtime (Pitch Bend)" p.28).

* For details refer to "About the XP-10's controllers" (p.30)

Chapter 3. Convenient performance functions

This chapter explains how to use the functions often used while you play, and how to make settings.

Add richness and space (Chorus) / Add reverberance (Reverb) to the sound

Chorus is an effect that adds richness and space to the sound, and is especially effective on electric piano, organ, and strings.
Reverb is an effect that adds the reverberance characteristic of a large space such as a concert hall.
Chorus and reverb are applied to all Tones and Drum Sets of the 16 Parts.

Selecting the Chorus/Reverb type

There are 8 types of Chorus and 8 types of Reverb. These settings determine which chorus and reverb will be used.

Types of chorus

CHORUS 1–4
Standard chorus effect.
FBK CHORUS
Chorus effect that simulates a flanger with soft sound.
FLANGER
An effect that is sometimes used to simulate the take-off and landing of a jet.
SHORT DELAY
A delay repeated in a short time.
S DELAY FB
A short dealy repated many times.

Types of reverb

ROOM 1–3
Reverb that simulates the natural echo of a room. Sharply defined reverb with a broad spread.
Hall 1–2
Reverb taht simulates the natural echo of a hall. Smooth reverb with greater depth than room.
PLATE
This effect simulates Plate Echo (a type of reverb that uses the vibration of metal plates to produce a metallic echo).
DELAY
Standard delay effect.
PAN DELAY
Delay repetitions pan to left and ritght. This effect can be used if the unit is connected to a stereo audio device. It is effective when the XP-10 is connected to a stereo system.

Changing the Chorus/Reverb type

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [6] several times to select "CHORUS Type" or "REVERB Type."

* If you hold down [ENTER] and press [6], you will return to the previous item.

4. Use VALUE[-]/[+] to select the type.

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Adjusting the Chorus/Reverb depth for the Tones of all Parts

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [6] several times to select "CHORUS Level" or "REVERB Level."

* If you hold down [ENTER] and press [6], you will return to the previous item.

4. Use VALUE[-]/[+] to set the value (0–127).
With a setting of 0, there will be no effect.

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Adjusting the Chorus/Reverb depth for the Tone of an individual Part

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Part" and press [ENTER].

3. Press [6] several times to select "Chorus Depth" or "Reverb Depth."

* If you hold down [ENTER] and press [6], you will return to the previous item.

4. Use PART [◀]/[▶] to select the Part that you wish to set.

* You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

5. Use VALUE[-]/[+] to set the value (0–127).
With a setting of 0, there will be no effect.

* If you wish to change the setting for other Parts, repeat steps 4—5.

6. Press [EDIT].
The indicator will go off, and the previous display will reappear.

* If CHORUS Level / REVERB Level is set to 0 as explained in "Adjusting the Chorus/Reverb level for the Tones of all Parts," there will be no effect even if the Chorus Depth / Reverb Depth is increased.

Playing single-note lines (Solo)

Use this function when you want to play only one note at a time, for example when playing a solo or Saxophone.

Turning Solo on/off

This can be set independently for each Part.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Part" and press [ENTER].

3. Press [8] several times to select "Solo Switch."

* If you hold down [ENTER] and press [8], you will return to the previous item.

4. Use PART [◀]/[▶] to select the Part on you wish to play solo.

* You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

5. Use VALUE[-]/[+] to switch the setting on/off.

* If you wish to change the setting for other Parts, repeat steps 4–5.

6. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Creating smooth pitch changes between notes (Portamento Time)

This setting lets you create smooth changes in pitch between one note and the next-played note.

Setting Portamento Time

This can be set independently for each Part.
On the XP-10, the portamento function is turned on by adjusting the time over which the pitch changes smoothly (the Portamento Time).

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Part" and press [ENTER].

3. Press [8] several times to select "Porta Time."

* If you hold down [ENTER] and press [8], you will return to the previous item.

4. Use PART [◀]/[▶] to select the Part whose Portamento Time you wish to change.

* You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

5. Use VALUE[-]/[+] to set the value (OFF, 1–127).
As the value is increased, the pitch will take a longer time to change. With a setting of OFF, the Portamento effect will be off, and portamento will not be applied.

* If you wish to change the setting of other parts, repeat steps 4–5.

6. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Adjusting how your keyboard playing dynamics affect the volume (Velocity Sensitivity)

You can specify how your keyboard playing dynamics will affect the volume.
This can be set for each Part. Make this setting for all Parts that you wish to play from the keyboard.

Making settings

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Part" and press [ENTER].

3. Press [8] several times to select "Velo Sens."

* If you hold down [ENTER] and press [8], you will return to the previous item.

4. Use PART [◀]/[▶] to select the Part whose Velocity Sensitivity you wish to adjust.

* You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

5. Use VALUE[-]/[+] to set the value (0–127).
As the value is increased, the volume will change more noticeably in response to your playing dynamics. With a setting of 0, each note will have the same volume regardless of how strongly you play.

* If you wish to make settings for other Parts, repeat steps 4–5.

6. Press [EDIT].
The indicator will go off, and the previous display will reappear.

When to use transposition (Transpose and Key Shift)

These functions let you shift the pitch of the keyboard in semitone steps, and can be useful in the following situations.

Adjusting the pitch to a singer's voice (Transpose)
If you want to change the pitch of a song so that the melody will fall within the range of the vocalist, you can use the Transpose function to change the pitch while continuing to play the song with the same fingering as before.

Transposing from a difficult key into an easier key (Transpose)
The Transpose function lets you use an easier fingering to play a song written in many sharps or flats.

Reading music written for a transposing instrument (Transpose)
The Transpose function lets you play music written for a transposing instrument just as it is printed.

Playing notes outside the range of the keyboard (Transpose)
The XP-10 has a 61-note keyboard, but in some cases you may wish to play notes that are above or below this range. Also, when playing a Drum Set etc., there may be percussion instruments that the XP-10's keyboard is not able to access. In such cases, you can use the Transpose function to play these notes.

Layering Tones at octave intervals (Key Shift)
When the Keyboard Mode is Dual, you can create a richer sound by setting the two Tones to different octaves.

Playing only the Tone of a specific Part in a lower pitch (Key Shift)
For example if the Keyboard Mode is set to Split and you are playing a bass Tone in the lower Part, you can use the Key Shift function to play the bass at a lower pitch.

Setting the amount of transposition (Transpose)

Here's how to specify the amount of transposition. You can specify a transposition of up to +/-2 octaves in semitone steps. The Part being played by the keyboard will be transposed.

* Note messages from MIDI IN will not be transposed.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [8] several times to select "Transpose."

* If you hold down [ENTER] and press [8], you will return to the previous item.

4. Use VALUE[-]/[+] to set the value (-24–+24).

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

An easy way to set Transpose
Hold down [TRANSPOSE] and press [EDIT] to jump directly to the "Transpose" page. Then follow steps 4–5 to make settings.
Also, you can quickly change the amount of transposition by holding down [TRANSPOSE] and using VALUE[-]/[+] to modify only the "Transpose" setting. When you release [TRANSPOSE], the previous display will reappear.

Turning Transpose on/off
Now that you have set the amount of transposition, here's how to turn the Transpose function on/off.
Press [TRANSPOSE] to make the indicator light.
The Part being played by the keyboard will be transposed.
Each time you press the button, the setting will alternate on/off.

* If the Transpose setting is 0, the indicator will not light even if you press the button.

Setting the transposition for a specific Part (Key Shift)

You can also specify transposition for just a specific Part, in semitone steps over a range of +/-2 octaves.

* Note messages from MIDI IN will also be transposed.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Part" and press [ENTER].

3. Press [7] several times to select "Key Shift."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use PART [◀]/[▶] to select the Part that you wish to transpose.

* You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

5. Use VALUE[-]/[+] to set the value (-24–+24).

* If you wish to make settings for other Parts, repeat steps 4–5.

6. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Raising and lowering the pitch in real time (Pitch Bend)

When you move the pitch bender (located at the left of the keyboard) to right or left, the pitch of the notes you are playing will rise or fall.

Adjusting the width of the pitch change

You can specify the width of the pitch change that will occur, in semitone steps up to a maximum of 2 octaves. This can be set independently for each Part.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Part" and press [ENTER].

3. Press [9] several times to select "Bend Range."

* If you hold down [ENTER] while you press [9], you will return to the previous item.

4. Use PART[◀]/[▶] to select the Part whose pitch bend range you wish to adjust.

* You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

5. Use VALUE[-]/[+] to set the value (0–+24).

* With a setting of 0, there will be no pitch bend effect.

* If you wish to make settings for other Parts, repeat steps 4–5.

6. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Modifying the sound in real time while you play

On the XP-10 you can use the Modulation lever, pedal, and Combination Palette sliders to make various changes in the sound as you play. For each aspect of the sound that you are controlling, you can select the controller that is most appropriate for your situation. These controllers will modify the Tone that is being played by the keyboard.

* When the Keyboard Mode is Split, the controllers will modify the Tone of the Lower Part.

These controllers do not always perform the function you specify. In the following cases, the controllers will act differently.

A)
When playing an arpeggio, you press [PALETTE SELECT] and use the sliders to control the arpeggio (When the arpeggio [ON/OFF] indicator is blinking)

* For details refer to "Changing the arpeggiator pattern while you play" (p.24) and "About the XP-10's controllers" (p.30).

B)
When the Keyboard Mode is X-dual and you are using either the modulation lever, a pedal, or a slider to control X-dual.

* For details refer to "Changing the X-dual controller" (p.20) and "About the XP-10's controllers" (p.30).

Using the Modulation Lever to modify the sound

What can be controlled by the Modulation Lever?

The Modulation Lever can control one of the following eight functions.

Functions assignable to the Modulation Lever
VIBRATO
add vibrato
ENV TIME
modify the Attack Time (p.34) and the Release Time (p.34)
PORTA TIME
modify the Portamento Time (p.26)
CUTOFF
modify the brightness of the sound
RESONANCE
modify the tonal character of the sound
RESO+CUTOFF
modify both CUTOFF and RESONANCE
RESO-CUTOFF
this produces an effect similar to a wah-pedal
R/RESO-CTOF
this produces a random wah effect. The sound will abruptly disappear and reappear.

Setting the function of the Modulation Lever

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [9] several times to select "MOD Asgn."

* If you hold down [ENTER] while you press [9], you will return to the previous item.

4. Use VALUE[-]/[+] to select the function that the modulation lever will control.

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

* For some sounds the effect may not be very noticeable, depending on the selected function of the lever and the value of the following MOD Depth parameter.

Setting the depth of the Modulation Lever effect

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [9] several times to select "MOD Depth."

* If you hold down [ENTER] while you press [9], you will return to the previous item.

4. Use VALUE[-]/[+] to set the value (-64–+63).
Higher values will produce a deeper effect.

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Using a pedal to modify the sound

What can be controlled by a pedal?

A pedal can control one of the following nine functions.

Functions assignable to the pedal

Since there is only one pedal jack, you need to connect the type of pedal that is appropriate for the function you wish to control.
To control the HOLD function, connect a pedal switch (sold separately: DP-2/6, FS-5U, etc.)
To control a function other than HOLD, connect an expression pedal (sold separately: EV-5, etc.)

HOLD
sustain the sound

EXPRESSION
adjust the volume

ENV TIME
modify the Attack Time (p.34) and the Release Time (p.34)

PORTA TIME
modify the Portamento Time (p.26)

CUTOFF
modify the brightness of the sound

RESONANCE
modify the tonal character of the sound

RESO+CUTOFF
modify both CUTOFF and RESONANCE

RESO-CUTOFF
this produces an effect similar to a wah-pedal

R/RESO-CTOF
this produces a random wah effect. The sound will abruptly disappear and reappear.

Setting the function of the pedal

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [9] several times to select "PEDAL Asgn."

* If you hold down [ENTER] while you press [9], you will return to the previous item.

4. Use VALUE[-]/[+] to select the function that the pedal will control.

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

* For some sounds the effect may not be very noticeable, depending on the selected function of the pedal (except for HOLD and EXPRESSION) and the value of the following PEDAL Depth parameter.

Setting the depth of the pedal effect

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [9] several times to select "PEDAL Depth."

* If you hold down [ENTER] while you press [9], you will return to the previous item.

4. Use VALUE[-]/[+] to set the value (-64–+63).
Higher values will produce a deeper effect.

* If the pedal function is HOLD or EXPRESSION, the Pedal Depth parameter is not available.

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Using the Combination Palette Sliders to modify the sound

What can be controlled by the Combination Palette Sliders?

The sliders can control one of the following six combinations of functions.

Functions assignable to the Combination Palette Sliders

F-LFO I LFO-R

Slider 1: TVF DEPTH LFO
apply modulation to the brightness of the sound

Slider 2: RATE CONTROL LFO
adjust the speed of modulation

A-LFO I LFO-R

Slider 1: TVA DEPTH LFO
apply modulation to the volume

Slider 2: RATE CONTROL LFO
adjust the speed of modulation

CUTOF I RESO

Slider 1: CUTOFF
adjust the brightness of the sound

Slider 2: RESONANCE
adjust the tonal character of the sound

ATTCK I RELES

Slider 1: ATTACK TIME
adjust the Attack Time (p.34)

Slider 2: RELEASE TIME
adjust the Release Time (p.34)

CHORS I REVRB

Slider 1: CHORUS DEPTH
adjust the depth of the Chorus effect

Slider 2: REVERB DEPTH
adjust the depth of the Reverb effect

RS-CO I PORTA

Slider 1: RESO-CUTOFF
produce a "wah" effect

Slider 2: PORTA TIME
adjust the Portamento Time (p.26)

Setting the function of the Combination Palette Sliders

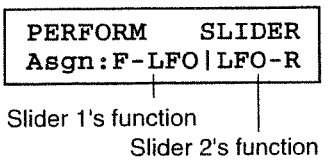
1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [9] several times to select "SLIDER Asgn."

* If you hold down [ENTER] while you press [9], you will return to the previous item.

4. Use VALUE[-]/[+] to select the functions that the sliders will control.



* When you move the sliders, the function and value of each slider will appear in the display.

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

* Depending on the sound and the slider functions, the effect may not be very noticeable for some sounds.

About the XP-10's controllers

The XP-10 provides the following controllers; Pitch Bender, Modulation Lever, pedal (either an expression pedal or a pedal switch), and Combination Palette Sliders.
The functions that can be controlled by each controller have been explained in chapters 2 and 3, and can be summarized as follows.

A)
When the Keyboard Mode is X-dual, X-dual can be controlled using either the Modulation Lever, the pedal, or the Combination Palette Sliders ("Changing the X-dual controller" p.20).

B)
When an arpeggio is being played, the arpeggio pattern can be controlled using the Pitch Bender or the Combination Palette Sliders ("Changing the arpeggiator pattern while you play" p.24).

C)
The pitch of the sound can be controlled using the Pitch Bender ("Raising and lowering the pitch in realtime (Pitch Bend) p.28).

D)
Various aspects of the sound can be changed as you play, using the Modulation Lever, the pedal, and the Combination Palette Sliders ("Modifying the sound in realtime while you play" p.28).

Since the XP-10 has a limited number of controllers, each controller has two or more functions assigned to it, as given above. This means that the function controlled by a controller at any given time will depend on the status of the XP-10; i.e., there is a priority order for the controller settings. The following paragraphs explain how the various functions of a controller are given priority.

Pitch Bender

Normally, this controls the pitch as described in section C. However when an arpeggio is playing and you press [PALETTE SELECT] (so that the arpeggio [ON/OFF] indicator is blinking), the Pitch Bender will control the Octave Range of the arpeggiator. If you press [PALETTE SELECT] once again (so that the arpeggio [ON/OFF] indicator is lit steadily), the Pitch Bender will once again control the pitch.

Other controllers

Normally, controllers will control the function that you assign them, as described in section D. There are two exceptions to this. 1) When the Keyboard Mode is X-dual, the controller that was specified as the X-dual controller (either the modulation lever, pedal, or slider) will control X-dual rather than the function it was assigned in section D. 2) When the arpeggiator is playing, the controller that was selected for arpeggio pattern control (the slider) will control the arpeggiator rather than the function it was assigned in section D. Furthermore, if the slider is selected to control X-dual and also to control the arpeggiator pattern, the last-selected function will take priority, as shown in the following examples.

Example 1

Suppose that the slider has been selected to control X-dual, and that the Keyboard Mode has been set to X-dual. In this case, the slider will control X-dual. Still in X-dual mode, suppose that you turned on the arpeggiator. The slider will still control X-dual. However if you now press [PALETTE SELECT], the slider will control the arpeggio pattern, and not X-dual. If you press [PALETTE SELECT] once again so that the slider no longer controls the arpeggiator, it will once again control X-dual.

Example 2

Suppose that the Keyboard Mode is other than X-dual, and that you are using the arpeggiator. If you now press [PALETTE SELECT], the slider will control the arpeggio pattern. However if you then press [X-DUAL] to switch the Keyboard Mode to X-Dual, the slider will control X-dual, and not the arpeggio pattern.

Selecting an entirely different set of XP-10 settings while you play (Performance)

What is a Performance?

On the XP-10, you can press buttons to select Tones or Drum Sets or change the Keyboard Mode, etc. at any time. However, making these changes requires a certain amount of time, and may be difficult to do while you continue playing. If you need to change many settings at once, it is convenient to use a Performance.

A Performance contains all the settings described from chapter 2 "Trying out the Tones" (p.16) to chapter 3 "Modifying the sound in real time while you play" (p.28). (In addition to these, there are also other settings which are included in a Performance. For details refer to "List of Performance parameters" p.59.)

If you store a group of settings in a Performance, you can then call up those settings instantly by simply selecting that Performance.

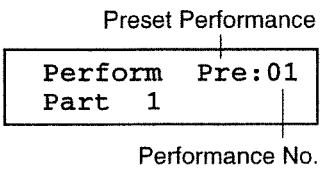
The XP-10 contains a total of 128 Performances; Preset Performances 1–64 are set at the factory and cannot be changed, and User Performances 1–64 allow you to store modified versions of the Preset Performances.

* For the numbers and contents of the Performances, refer to "Performance list" (p.69).

Selecting a Performance

1. Press [PERFORM/TONE].
The Performance Select display will appear.

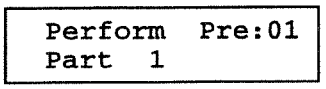
2. Press [USER/PRESET] and select either "Pre" (Preset Performances) or "User" (User Performances).



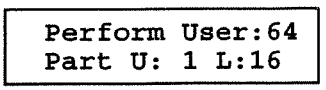
3. Use the numeric keys ([1]–[0]) to specify the number (1–64) of the Performance you wish to select.
If you make a mistake, press [CANCEL] and specify the number once again.

* You can also select Performances using VALUE[-] /[+] instead of the numeric keys. In this case, skip step 4.

4. Press [ENTER] to finalize the selection.



Keyboard Mode: Single



Keyboard Mode:
Dual, X-Dual, Split

5. Press [PERFORM/TONE].
The Tone Select display will reappear.

Storing a Performance

Make any desired changes to the settings of the Performance.
All the settings discussed from chapter 2 "Trying out the Tones" (p.16) to chapter 3 "Modifying the sound in real time while you play" (p.28) are included in a Performance.

* In addition to these, there are also other settings which are included in a Performance. For details refer to "List of Performance parameters" (p.59).
* When making Performance settings, you may wish to set the Keyboard Mode to Single, and switch between the Parts to make the necessary settings for each Part. In this case, the "Upper Part" setting will automatically be rewritten. If you have switched Parts, remember to re-set the "Upper Part" setting before you save the Performance. For details refer to "Selecting Parts" and "About the Part played by the keyboard in Single mode" (p.19). You will also switch Parts when creating a Tone or a Drum Set (Chapter 4. "Creating your own Tone or Drum Set" p.34), and in such cases also, the "Upper Part" setting will automatically be rewritten. Here too, you will need to re-set the "Upper Part" setting.

When you have finished making settings for your Performance, be careful not to select a Performance. If you select a Performance before saving your edited Performance, your edits will be lost.
When you save (write) a Performance, the settings that were previously in that User Performance memory will be overwritten and lost. Make sure that the Performance in the writing destination is one that you do not need to keep.

* If you turn the power off without saving the Performance, the Performance settings you made will be lost.

1. Press [UTILITY].
The indicator will light.

2. Use VALUE[-]/[+] to select "Write Perform" and press [ENTER].

3. Use the numeric keys ([1]–[0]) to specify a Performance number (1–64) as the writing destination.
If you enter the wrong number, press [CANCEL] and enter the number once again.

* You can also specify the Performance number using VALUE[-]/[+] instead of the numeric keys. In this case, there is no need to press [ENTER] in step 4.

4. Press [ENTER] to finalize the number.

* If you wish to cancel the operation, press [UTILITY]. The indicator will go off, and the previous display will reappear.

5. Press [ENTER] once again to write the Performance into memory.
When the Performance has been written, the display will indicate "Completed" and the [UTILITY] indicator will go off.

Changing from equal temperament to Pure Temperament or an Arabic scale (Scale Tune)

What are Equal Temperament, Pure Temperament, and Arabic scales?

Equal Temperament

This scale divides the octave into 12 equal steps, and is the most widely used scale, especially in the music of the Western world.

Pure Temperament

In comparison to Equal Temperament, Pure Temperament allows the three principal chords to have a purer sound. However, these chords will be pure only in one key, and chords played in a different key will be discordant.

Arabic Scale

In comparison to Equal Temperament, E and B are 1/2 a semitone low, and C#, F# and G# are 1/2 a semitone high. The intervals of G–B, C–E, F–G#, A#–C# and D#–F# are neutral thirds (an interval midway between a major third and a minor third).

Making Scale Tune settings

You can adjust the Scale Tune settings to make a variety of scales. These settings allow you to make fine adjustments in 1 cent (1/100th of a semitone) to the pitch of each note C–B.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "Scale Tune C" – "Scale Tune B."

* If you hold down [ENTER] and press [7], you will return to the previous item.

* You can also select the note whose pitch you wish to change by playing a note on the keyboard.

4. Use VALUE[-]/[+] to set the value (-64–+63).

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Setting examples
Here are examples of scales based on a root of C.

Note name	Equal Temperament	Pure Temperament (C)	Arabic Scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
D#	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F#	0	-10	+43
G	0	+2	-4
G#	0	+14	+47
A	0	-16	0
A#	0	+14	-10
B	0	-12	-49

* In this example, the Arabic Scale can be played in the three keys of G, C, and F.

Turning Scale Tune on/off

This can be set independently for each Part. When Scale Tune is turned off, that Part will use Equal Temperament.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Part" and press [ENTER].

3. Press [7] several times to select "Scale Tune."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use PART [◀]/[▶] to select the Part for which you want to make the setting.

* You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

5. Use VALUE[-]/[+] to switch the setting "ON"/"OFF".

* If you wish to make settings for other Parts, repeat steps 4–5.

6. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Chapter 4. Creating your own Tone or Drum Set

Creating your own Tone

You can modify the settings of a Preset Tone to create your own original Tone. A Tone that you create can be stored as a User Tone.
Eight parameters (aspects) of a Tone are available for you to modify. These parameters are organized into three groups; vibrato, filter, and envelope. You can create your own original Tone by modifying these parameters.

What aspects of a Tone can be modified?

[1]Vibrato (VIBRATO)

The following settings control the manner in which Vibrato (a gentle pitch fluctuation) is applied.

Vibrato Rate (Vib Rate)
Acceptable Values: -50 — +50
Adjusts the speed of the vibrato.

Vibrato Depth (Vib Depth)
Acceptable Values: -50 — +50
Adjusts the depth of the vibrato.

Vibrato Delay (Vib Delay)
Acceptable Values: -50 — +50
This setting allows you to adjust the interval that is to pass from the moment a key is pressed until the moment that Vibrato begins to take effect.

[2] Filter(FILTER)

The following settings allow you to you alter the nuance of a sound by changing its harmonic content.

Cut-Off Frequency (FilterCutoff)
Acceptable Values: -50 — +16
Sets the frequency at which harmonics will be cut.

Resonance (Filter Reso)
Acceptable Values: -50 — +50
Provides an adjustment for the amount of emphasis to be placed on the harmonics in the vicinity of the Cutoff Frequency.

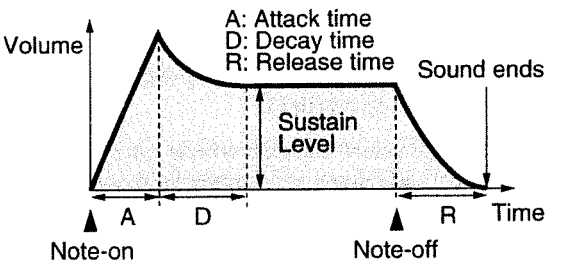
[3]Envelope (ENVELOPE)

The following settings create the change in volume and Cutoff Frequency that will occur over time.

Attack Time (Env Attack)
Acceptable Values: -50 — +50
Adjusts the time it takes for the initial portion of a sound (the 'attack') to be heard after a key is pressed.

Decay Time (Env Decay)
Acceptable Values: -50 — +50
Adjusts the time it will take for the sound to reach the "Sustain Level." The Sustain Level is the point at which most of the volume/cut-off frequency modifications have stabilized.

Release Time (Env Release)
Acceptable Values: -50 — +50
Adjusts the time it takes for the sound to fade away after a key is released.



Procedure for creating and saving a Tone

Follow the steps given below in "Creating a Tone" and "Saving a modified Tone" as a continuous procedure. "Creating a Tone" explains the procedure for modifying a Tone. "Saving a modified Tone" explains the procedure for writing the new data into memory.
If you wish to modify and save two or more Tones, repeat this entire procedure for each Tone.

Creating a Tone

After using the following procedure to modify a Tone, be careful not to select a Tone. If you select a Tone before saving your edits, your changes will be lost.

1. Select the Tone that you wish to modify ("Selecting a Preset Tone" p.16, "Selecting a User Tone" p.16).
You may select either a Preset Tone or a User Tone.

2. Press [EDIT].
The indicator will light.

3. Use VALUE[-]/[+] to select "Tone/Drum" and press [ENTER].

4. Press a numeric key [1]–[3] several times to select the parameter you wish to edit.

* If you hold down [ENTER] while you press [1]–[3], you will return to the previous item.

5. Use VALUE[-]/[+] to set the value of the parameter.

* If you wish to set the value of other parameters, repeat steps 4–5.

6. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Saving a modified Tone

The modified Tone can be saved in one of 256 locations (1–128 of User 1, 1–128 of User 2). Since User 1 contains Tones which are used by the User Performances, we suggest that you save your modified Tone in User 2.
When you save a Tone, the User Tone that previously occupied that location will be lost. Be sure to save your Tone to a destination that contains a User Tone that you do not need to keep.

* If you turn the power off without saving the Tone, the Tone settings you made will be lost.

7. Press [UTILITY].
The indicator will light.

8. Use VALUE[-]/[+] to select "Write Tone/Drum" and press [ENTER].

9. Press [TONE VARIATION], and select either "User 1" or "User 2."

10. Use the numeric keys ([1]–[0]) to specify the saving destination Tone number (1–128).
If you make a mistake, press [CANCEL] and enter the number once again.

* You can also specify the Tone number using VALUE[-]/[+] instead of the numeric keys. In this case, there is no need to press [ENTER] in step 11.

11. Press [ENTER] to finalize the number.

* To cancel the operation, press [UTILITY]. The indicator will go out, and the previous display will reappear.

12. Press [ENTER] once again, and the edited Tone will be written into memory.
When the Tone has been written into memory, the display will indicate "Completed." The [UTILITY] indicator will go off, and the previous display will reappear.

Creating your own Drum Set

You can create your own Drum Set by editing the percussion instrument sounds in one of the Preset Drum Sets. A Drum Set that you create can be saved as a User Drum Set.
Four parameters (aspects) of a Drum Set can be modified. To create your own Drum Set, you will modify these parameters.

What aspects of a Drum Set can be modified?

Pitch(Pitch)
Acceptable Values: -24 — +24
Adjusts the pitch of the percussive sound in semitone steps.

Level (Level)
Acceptable Values: 0 — 127
Adjusts the volume of the sound.

Pan (Pan)
Acceptable Values: RND, L63 — R63
Allows you to set the panning (localization of sound image) for each sound (obtained only with a stereo output). With an increase in the value for L, more of the sound will be heard as coming from the left side. Similarly, more of the sound will originate at the right if the value of R is increased.
When set to RND (Random), you obtain a specialized effect whereby the sound randomly moves left and right with each key stroke.

Reverb Depth (Reverb Depth)
Acceptable Values: 0 — 127
Setting for the manner in which reverb is to be applied.

Procedure for creating and saving a Drum Set

Follow the steps given below in "Creating a Drum Set" and "Saving a modified Drum Set" as a continuous procedure. "Creating a Drum Set" explains the procedure for modifying a Drum Set. "Saving a modified Drum Set" explains the procedure for writing the new data into memory.
If you wish to modify and save two or more Drum Sets, repeat this entire procedure for each Drum Set.

Creating a Drum Set

After using the following procedure to modify a Drum Set, be careful not to select a Drum Set. If you select a Drum Set before saving your edits, your changes will be lost.

1. Select the Drum Set that you wish to modify ("Selecting a Drum Set" p.18).
You may select either a Preset Drum Set or a User Drum Set.

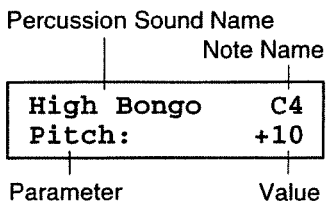
2. Press [EDIT].
The indicator will light.

3. Use VALUE[-]/[+] to select "Tone/Drum" and press [ENTER].

4. Press [4] several times to select the parameter you wish to edit.

* If you hold down [ENTER] while you press [4], you will return to the previous item.

5. Press a note on the keyboard to select the percussion instrument that you wish to modify.



* If you wish to modify the drum sound of a key which is outside the range of the keyboard, use the Transpose function (p.27) to shift the range of the keyboard.

6. Use VALUE[-]/[+] to set the values of the parameters.

* If you wish to set the value of other parameters, repeat steps 4–6.

* If you wish to modify other percussion instruments in the Drum Set, repeat steps 4–6.

7. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Saving a modified Drum Set

The modified Drum Set can be saved in one of 20 locations (1–20 of User). Be sure to save your Drum Set to a destination that contains a User Drum Set that you do not need to keep.

* If you turn the power off without saving the Drum Set, the Drum Set settings you made will be lost.

8. Press [UTILITY].
The indicator will light.

9. Use VALUE[-]/[+] to select "Write Tone/Drum" and press [ENTER].

10. Use the numeric keys ([1]–[0]) to specify the saving destination Drum Set number (1–20).
If you make a mistake, press [CANCEL] and enter the number once again.

* You can also specify the Drum Set number using VALUE[-]/[+] instead of the numeric keys. In this case, there is no need to press [ENTER] in step 11.

11. Press [ENTER] to finalize the number.

* To cancel the operation, press [UTILITY]. The indicator will go out, and the previous display will reappear.

12. Press [ENTER] once again, and the edited Drum Set will be written into memory.
When the Drum Set has been written into memory, the display will indicate "Completed." The [UTILITY] indicator will go off, and the previous display will reappear.

Chapter 5. Restoring the factory settings (Initialize)

No matter how you modify the settings of the XP-10, or edit the sounds, you will always be able to bring back the following four types of initial or basic settings.

Caution
When you execute Factory Preset, Tone/Drum Set Initialize, or Performance Initialize, the settings of the User area (the location where the settings you make, such as User Tones etc. are held) and System Setup settings will be lost. If you wish to preserve your important settings, use the "Bulk Dump (All)" function to save the settings to a sequencer, etc. (Refer to chapter 10, "Using a sequencer or computer to save XP-10 settings (Bulk Dump)" p.57.) After you have saved your data, use one of the following procedures to initialize the desired type of data.

Restoring all settings to the factory condition (Factory Preset)

This operation will restore all User Tone, User Drum Set, User Performance and System Setup settings to the factory condition.

Procedure

1. Press [UTILITY].
The indicator will light.

2. Use VALUE[-]/[+] to select "Initialize" and press [ENTER].

3. Use VALUE[-]/[+] to select "Factory Preset."

* To cancel the procedure, press [UTILITY]. The indicator will go off, and the previous display will reappear.

4. Press [ENTER] to execute the operation.

5. When the factory data has been restored, the display will indicate "Completed" and the [UTILITY] indicator will go off.

Restoring specific types of settings to the factory condition (Tone/Drum Set Initialize, Performance Initialize)

These operations let you reset the User Tone/Drum Set data or the User Performance settings to the factory settings.

Tone/Drum Set Initialize (User: Tone/Drum)
This will reset the 256 User Tones and the 20 User Drum Sets to the factory settings.

Performance Initialize (User: Performance)
This will reset the 64 User Performances to the factory settings.

Procedure

1. Press [UTILITY].
The indicator will light.

2. Use VALUE[-]/[+] to select "Initialize" and press [ENTER].

3. Use VALUE[-]/[+] to select "User: Tone/Drum" or "User: Performance."

* To cancel the procedure, press [UTILITY]. The indicator will go off, and the previous display will reappear.

4. Press [ENTER] to execute the operation.

5. When the factory data has been restored, the display will indicate "Completed" and the [UTILITY] indicator will go off.

Restoring the GS initial settings (GS Reset)

Before GS music data is played back on the XP-10, the sound source must be reset to the GS initial settings. A GS Reset message is included at the beginning of GS music data. If you play back the song from the beginning, the sound source of the XP-10 will receive this message and automatically reset itself to the GS initial settings. (Be sure to play back the song from the beginning. If you start playback from the middle of the song, it may not be played back correctly.)

If a GS Reset message is not included at the beginning of GS music data that you yourself create, you will need to manually reset the sound source of the XP-10 to the GS initial settings. Use the following procedure.

* You should also use this procedure if a General MIDI System On message is not included at the beginning of a General MIDI score. For details on General MIDI score and GS music data, refer to chapter 7, "Using the XP-10 as a General MIDI System / GS Format compatible sound source" (p.49).
* For the initial values of these settings, refer to "Parameter list" (p.67).
* Executing GS Reset will not affect the memory contents of the User Tones, User Drum Sets, and User Performances.

Procedure

1. Press [UTILITY].
The indicator will light.

2. Use VALUE[-]/[+] to select "Initialize" and press [ENTER].

3. Use VALUE[-]/[+] to select "Perform: GS Reset."

* To cancel the procedure, press [UTILITY]. The indicator will go off, and the previous display will reappear.

4. Press [ENTER] to execute the operation.

5. When the GS settings have been reset, the display will indicate "Completed" and the [UTILITY] indicator will go off.

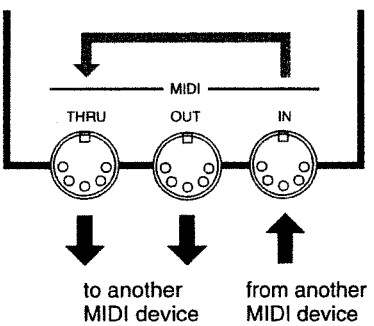
Chapter 6. Using two or more Parts to create an ensemble (Multitimbral operation)

The XP-10 is a multitimbral sound source

The XP-10 is a multitimbral synthesizer with 16 Parts. Each Part corresponds to an individual musician in an orchestra or band, and is able to independently play a different sound, and can also have independent effect settings. "Multitimbral" refers to the ability to produce two or more types of sound ("timbres") at once.
By using MIDI to connect the XP-10 to a sequencer or to a computer that is running sequencing software, you can create ensembles with many Parts. For details refer to chapters 7 and 8.

What is MIDI?

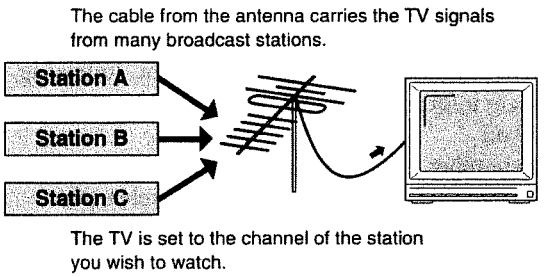
MIDI (Musical Instrument Digital Interface) is a world-wide standard that allows electronic musical instruments and computers etc. to exchange musical data. Instead of transmitting "sound," MIDI transmits digital data and commands that describe a musical performance. The various types of digital data handled by MIDI are called MIDI messages.
If a device has a MIDI connector, it can be connected to other MIDI devices simply by connecting a MIDI cable, regardless of its manufacturer or model type. For example, you can use the XP-10 to play other sound sources, or use a sequencer etc. to play the XP-10.



MIDI IN : This connector receives messages from another MIDI device.
MIDI OUT : This connector transmits messages from the XP-10.
MIDI THRU : This connector retransmits the messages received at MIDI IN.

MIDI Channels

MIDI uses "channels" to transmit a wide variety of information over a single cable, in a way somewhat similar to the way that television channels work.
By changing the channel on a television set, you can view the program that is being broadcasted on the selected channel. MIDI channels work in the same way, so that data on a particular channel is received only if the receiving device is set to the same channel as the transmitting device.


The cable from the antenna carries the TV signals from many broadcast stations.
Station A
Station B
Station C
The TV is set to the channel of the station you wish to watch.

There is however a major difference between the XP-10 and a television set. A television set is able to receive only 1 channel at a time. However the XP-10 is able to receive data independently on the MIDI channel of each of its 16 Parts. This means that the XP-10 can receive up to 16 channels of MIDI data to independently play up to 16 Tones, creating a rich ensemble.

MIDI messages used by the XP-10

MIDI uses various types of message to transmit a wide variety of information. This section will discuss the main types of MIDI message used by the XP-10. MIDI messages can be broadly divided into the following two groups.

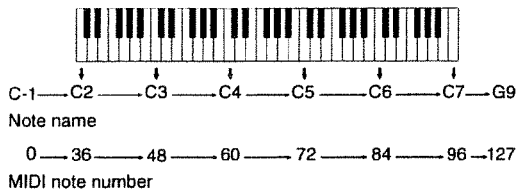
Channel messages:
messages handled separately by MIDI channel
System messages:
messages that apply regardless of MIDI channel

Channel messages

Channel messages transmit musical performance gestures, and make up the majority of MIDI data.

Note-on messages
These messages are transmitted when you play a note. A Note-on message contains the following 3 types of information.
Note-on : a note was played
Note number : which note was played
Velocity : how strongly it was played

The note number is a number from 0 to 127, with 60 corresponding to middle C (C4).



Note-off messages
These messages are transmitted when you release a note. A Note-off message contains the following 3 types of information.
Note-off : a note was released
Note number : which note was released
Velocity : how quickly it was released
The XP-10 receives Note-off messages, but ignores the note-off velocity.

Pitch Bend messages
These messages indicate the position to which the Pitch Bender was moved.

Aftertouch messages
These messages indicates how strongly the keyboard was pressed after playing a note. There are two types of Aftertouch message; Channel Aftertouch which applies to an entire channel, and Polyphonic Aftertouch which applies to an individual note. The XP-10 is not able to transmit Aftertouch messages. In order for the XP-10 to receive Aftertouch messages, you must use Exclusive messages to turn aftertouch reception on and to specify the effect which aftertouch messages will control. For details refer to the MIDI Implementation (p.92).

Program Change messages
These messages select sounds.

Control Change messages
These messages transmit various types of data to make a performance more musically expressive, for example to control vibrato, hold, expression or pan. The XP-10 can use the value of Control Change number 0 to select Variations of a Tone.

System messages
System messages include Exclusive messages, synchronization-related messages, and messages that help to keep a system running smoothly. Exclusive messages are the main type of messages in this group that the XP-10 uses.

Exclusive messages
These messages are used to convey information that is specific to a particular device, such as sound data. In general, they can be transmitted and received only between devices of the same model and manufacturer. The XP-10 can use exclusive messages to store sound data settings and system settings on a sequencer.

* In order to transmit and receive Exclusive messages, the Device ID number of both devices must be set to match (p.46).

About the MIDI Implementation Chart
A variety of messages can be transmitted using MIDI, but not all devices will necessarily be able to transmit and/or receive all types of MIDI message. To see which types of MIDI message a device can transmit and receive, refer to the MIDI Implementation Chart that is included in the manual of each device. Messages which are marked by a circle ○ in the charts of both devices can be transmitted between the two devices.

Selecting sounds via MIDI

Using MIDI, sounds on another device can be selected from the XP-10, and sounds on the XP-10 can be selected from the other device.

Selecting sounds on another device using the XP-10

When you use the buttons on the XP-10's panel to select Tones or Drum Sets, Control Change messages and a Program Change message that correspond with the selected Tone or Drum Set will be transmitted from MIDI OUT. These MIDI messages are transmitted in the following order.

1. Control Change number 0 (Bank Select MSB) (BnH 00H mmH)

2. Control Change number 32 (Bank Select LSB) (BnH 20H llH)

3. Program number (CnH ppH)
n : MIDI channel number
m,ll : Bank number
pp : Program number

* MIDI messages are not transmitted when you select a different Tone or Drum Set by moving to a different Part. MIDI messages are transmitted when you select the Tone or Drum Set used by a Part.

* These messages for sound selection are transmitted on the Transmit channel of the keyboard (refer to "Set/check the Keyboard Transmit Channel" p.45).

* These messages for sound selection are not transmitted when you select a Performance.

When you select a Tone or Drum Set on the XP-10, the MIDI message that is transmitted will be as follows.

* If the program numbers of the external MIDI device are listed as 0–127, subtract 1 from the program numbers in the following chart.

Type of selected Tone		MSB/LSB	PC#
Preset Tones	Capital Tone	00H/00H	1–128
	Variation (GS)	01H–20H/00H	1–128
	Variation (XP-10 original)	42H–4AH/00H	1–128
User Tones	User Tone 1	40H/00H	1–128
	User Tone 2	41H/00H	1–128
Type of selected Drum Set		**MSB/LSB**	**PC#**
Preset Drum Sets	STANDARD	00H/00H	1
(GS)	ROOM	00H/00H	9
	POWER	00H/00H	17
	ELECTRONIC	00H/00H	25
	TR-808	00H/00H	26
	JAZZ	00H/00H	33
	BRUSH	00H/00H	41
	ORCHESTRA	00H/00H	49
	SFX	00H/00H	57
(XP-10 original)	STANDARD 2	00H/00H	67
	STANDARD 3	00H/00H	68
	ROOM 2	00H/00H	69
	ROCK	00H/00H	70
	TR-909	00H/00H	71
	DANCE	00H/00H	72
	TECHNO	00H/00H	73
User Drum Sets	User Set 1	40H/00H	1
	User Set 2	40H/00H	9
	User Set 3	40H/00H	17
	User Set 4	40H/00H	25
	User Set 5	40H/00H	26
	User Set 6	40H/00H	33
	User Set 7	40H/00H	41
	User Set 8	40H/00H	49
	User Set 9	40H/00H	57
	User Set 10	40H/00H	67
	User Set 11	40H/00H	68
	User Set 12	40H/00H	69
	User Set 13	40H/00H	70
	User Set 14	40H/00H	71
	User Set 15	40H/00H	72
	User Set 16	40H/00H	73
	User Set 17	40H/00H	74
	User Set 18	40H/00H	75
	User Set 19	40H/00H	76
	User Set 20	40H/00H	77

* PC# indicates the Program number.

* In the Preset Tones, the Capital Tones and Variation (GS) are Tones which are defined by the GS Format. Variation (XP-10 original) are not defined in the GS Format.
* The Preset Drum Sets STANDARD–SFX are defined in the GS Format. STANDARD2–TECHNO are not defined in the GS Format. These Drum Sets are original to the XP-10.
* In the above table, numbers ended by an "H" such as "00H" or "40H" are hexadecimal numbers.

The MIDI sound-selecting messages transmitted from the XP-10 can select sounds on a MIDI device connected to the XP-10. However, not all types of MIDI device will necessarily respond in this way. For details on how your MIDI device receives MIDI sound-selecting messages and which sounds will be selected, refer to the manual for your device.

Selecting XP-10 Tones or Drum Sets using another device

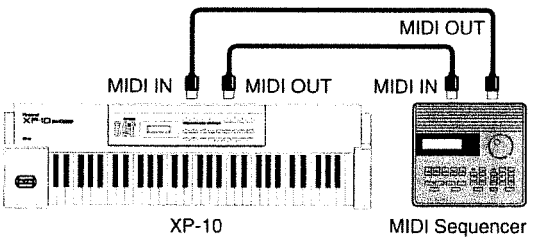
By transmitting the appropriate combination of Control Change messages and Program Change messages to the XP-10, you can select XP-10 Tones and Drum Sets.
The correspondence between the incoming messages and the XP-10 sounds that will be selected is described in the preceding section "Selecting sounds on another device from the XP-10."

* If you wish to select XP-10 sounds, set the Performance parameter "Tone Change Receive Switch" to ON. If this is off, XP-10 sounds cannot be selected ("Turn on the Tone Change Receive Switch" p.45).
* The order in which messages must be transmitted to select XP-10 sounds is the same order as given in the preceding section "Selecting sounds on another device using the XP-10." If the order is incorrect, the sound will not be selected correctly.
* Messages to select sounds are received on the Receive Channel of each Part ("Set/check the settings of each Part" p.45).
* It is not possible to select XP-10 Performances by transmitting MIDI messages to the XP-10.

Chapter 7. Using a sequencer to create an ensemble

Connections

Connect the XP-10 and your sequencer (MC-50mkII, etc.) as shown below.



* In order to prevent damage to your speaker system, etc., set the volumes of all devices to the minimum position and turn the power off before making connections.

Turning the power on/off

When you finish making connections, use the following procedure to turn the power on.

* Be sure that the volume controls of your amp and/or mixer are at the minimum position. This will prevent speakers from being damaged from the noise that occurs when the power is turned on.

1. Set the XP-10's Computer switch to the "MIDI" position.

* Before moving the Computer switch, make sure that the XP-10 power is turned off. If you change the setting of this switch with the power turned on, the unit will not operate correctly.

2. Turn on the XP-10 power.

* This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.

3. Turn on the sequencer power.

4. Turn on the power of your amp and/or speaker system, etc.

5. Raise the volume controls of your system to an appropriate level.

Before turning the power off, set all volume controls to the minimum position. Then turn off the power in the opposite order with which you turned the power on.

* When you turn off the power of the XP-10, the settings you have modified (Performances, Tones, Drum Sets) will be lost. Before you turn the power off, be sure to store your changes. For Performances, refer to "Selecting an entirely different set of XP-10 settings while you play (Performance)" (p.31). For Tones and Drum Sets, refer to Chapter 4. "Creating your own Tone or Drum Set" (p.34).

* When you turn off the power of the sequencer, the song you recorded will be lost. Before turning the power off, be sure to save the song you recorded.

Using the XP-10 panel button to control sequencer start/stop

The XP-10's [SEQ CTRL] button allows you to control the start/stop of an external sequencer connected to the XP-10.

Sequencers that can be controlled from the XP-10's panel

The XP-10 is not necessarily able to control all sequencers. It can control sequencers that meet the following two conditions.

1. The sequencer must operate on its own internal clock.

2. The sequencer must respond to Start/Stop messages that it receives at its MIDI IN connector.

Refer to the manual of your sequencer to check whether it satisfies these two conditions.

If your sequencer does not meet these two conditions, use the start/stop buttons of your sequencer to control it.

* Pressing the XP-10 [SEQ CTRL] button does not cause it to transmit MIDI Clock messages.

Sequencer settings

Make settings on your sequencer so that the above two conditions are met. For details refer to the manual for your sequencer.

If you are using the MC-50 sequencer, set Sync Mode to "INTERNAL" and set Remote Control to "ON."

If you are using the MC-50mkII sequencer, set Sync Clock to "REMOTE."

If you are using the XP-50 sequencer, set Sync Mode to "REMOTE."

If you are using the JW-50 sequencer, set Sync Clock to "REMOTE."

Before you record

This section explains the general process from recording to playback, and the settings that you need to make before recording.

Recording procedure

When recording your playing on a sequencer, you will play each Part from the keyboard while listening to a "click" (rhythmic guide) produced by the sequencer's metronome. It is a good idea to record the drum part first, so that you can listen to it as you record the rest of the parts on other tracks of the sequencer.

If you have difficulty playing the drum part on the keyboard, you can use the sequencer's Step Input function to create the data for the drum part, or play back a rhythm machine (R-8mkII, R-70, etc.) together with the sequencer.

By performing the following operations while you record, you can record the data that corresponds to each operation.

1. Select the Tone of the Part you are playing on the keyboard

2. Operate a controller such as the pitch bender or modulation lever

Operations such as switching the Tone of a Part or operating the controllers can also be recorded later ("overdubbed") on a different sequencer track, while you listen to the previously-recorded tracks play back.

Turn off the XP-10's Local Control

What is Local Control?

The "Local Control" setting determines whether or not the keyboard controller section (the keyboard, panel buttons, controllers such as the pitch bender or modulation lever) will be internally connected to the sound source section.

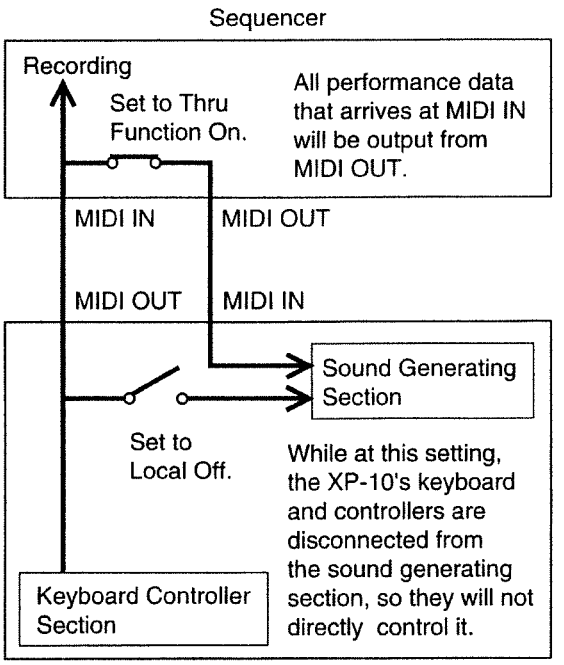
When Local Control is on, playing the keyboard will produce sound, and moving the pitch bender will control the pitch. When Local Control is off, playing the keyboard will not produce sound, and moving the pitch bender will not control pitch. The sound source of the XP-10 will produce sound only in response to messages received from an external MIDI device.

The basic settings to make when recording your playing on a sequencer are as follows.

1. Turn the XP-10's Local Control setting OFF.

2. Turn the sequencer's Thru function ON (refer to the following section).

With these settings, the flow of musical data will be as follows.


Sequencer
Recording
Set to Thru Function On.
All performance data that arrives at MIDI IN will be output from MIDI OUT.
MIDI IN
MIDI OUT
MIDI OUT
MIDI IN
Sound Generating Section
Set to Local Off.
While at this setting, the XP-10's keyboard and controllers are disconnected from the sound generating section, so they will not directly control it.
Keyboard Controller Section
XP-10

The musical data from the XP-10's keyboard controller section will be transmitted from MIDI OUT and recorded by the sequencer. This musical data is then transmitted from the sequencer's MIDI OUT to the XP-10, and will play the sound source of the XP-10.

If Local Control were ON, each note would be played twice; once by the musical data from the keyboard controller section, and once again by the data sent from the sequencer. In order to prevent such double triggering, the Local Control setting is turned off to separate the keyboard controller section from the sound source section.

* If your sequencer does not have a Thru function, set the XP-10's Local Control to ON.
* In order to prevent problems (such as no sound being produced), the Local Control setting is automatically turned ON when the XP-10 power is turned on.
* Regardless of the Local Control setting, musical data from an external MIDI device is always received and will play the internal sound source.

Local Control setting

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "Local."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to turn the setting "OFF."

5. Press [EDIT].
The indicator will go out, and the previous display will reappear.

Turn the sequencer's Thru function ON

Turn the sequencer's Thru function ON. With this setting, musical data received at the sequencer's MIDI IN will be re-transmitted from MIDI OUT (refer to the previous section).
For details on whether or not your sequencer has a Thru function and how to make the setting, refer to the manual for your sequencer.

* If your sequencer does not have a Thru function, turn the XP-10's Local Control ON.

Select a Performance

Select the Performance that you wish to use when recording. Before you begin recording, make Performance settings (select the desired Tone and Keyboard Mode, and make settings for reverb and chorus), and store them into memory. (Refer to "Selecting a Performance" p.31 and "Storing a Performance" p.32.)

* Be sure to store the Performance before you begin recording.

Set/check the Keyboard Transmit Channel

Set/check the Keyboard Transmit Channel setting for the Performance you selected.
If this is set to PART, your playing will be transmitted on the same channel as the Receive Channel of the Part that you are playing. When recording on a sequencer, you will normally set this setting to PART.
If this is set to a channel 1–16, your playing will be transmitted on the specified channel. If you are using the XP-10 to play an external MIDI sound source, it is convenient to set this to the desired channel 1–16.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [7] several times to select "Tx Channel."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to specify the value (PART, 1–16).
Since we will be recording on a sequencer, select PART.

5. Press [EDIT].
The indicator will go out, and the previous display will reappear.

* If you change the settings, be sure to store the Performance again ("Storing a Performance" p.32).

Turn on the Tone Change Receive Switch

Turn on the Tone Change Receive Switch of the selected Performance (or make sure that it is turned on).
If this is on, messages from the sequencer can select XP-10 Tones.
If this is off, messages from the sequencer will not select XP-10 tones.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" and press [ENTER].

3. Press [7] several times to select "Rx Tone Change."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to turn the setting "ON."

5. Press [EDIT].
The indicator will go out, and the previous display will reappear.

* If you change the settings, be sure to store the Performance again ("Storing a Performance" p.32).

Set/check the settings of each Part

Receive Channel

Set/check the Receive Channel setting of each Part in the selected Performance.
If the Receive Channel is set to a value of 1–16, that Part will receive musical data on the specified channel. If the Receive Channel is turned OFF, that Part will not receive musical data, and therefore will not sound.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Part" and press [ENTER].

3. Press [7] several times to select "Rx Channel."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use PART [◀]/[▶] to select a Part.

* You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

5. Use VALUE[-]/[+] to specify the value (1–16, OFF).

* If you wish to make settings for other Parts, repeat steps 4–5.

6. Press [EDIT].
The indicator will go out, and the previous display will reappear.

* If you change the settings, be sure to store the Performance again ("Storing a Performance" p.32).

Tone / Drum Set

Make sure that the desired Tone or Drum Set is selected for each Part of the selected Performance. If not, select the appropriate Tones or Drum Sets ("Selecting a Preset Tone" p.16, "Selecting a User Tone" p.16, "Selecting a Drum Set" p.18).

* If you change the settings, be sure to store the Performance again ("Storing a Performance" p.32).

Playing back with the same setup as when recording

In order to make sure that your song is played back correctly, be aware of the following four points.

1) Use the same Performance settings for recording and playback

The Performance you select when playing back a song you recorded must have the same settings as the Performance you used to record the song. This can be ensured in one of the following two ways; "Recording the Performance settings" and "Saving and selecting the Performance."

Recording the Performance settings (Performance Dump)

If you record your Performance settings at the beginning of the musical data, the appropriate Performance data will be transmitted to the XP-10 when that song is played back, ensuring that the XP-10 has the correct Performance data. For the recording procedure, refer to "Recording the Performance settings" (p.47).
In order to record Performance data on the sequencer, you will need to make settings for the Performance Dump Transmit switch and the Device ID Number.

Turning on the Performance Dump Transmit switch

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "Tx PerformDump."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to turn the setting "ON."

5. Press [EDIT].
The indicator will go out, and the previous display will reappear.

* Leave this setting off except when you want to record Performance settings.

Setting the Device ID Number

Performance settings are transmitted from MIDI OUT as Exclusive data. When transmitting Exclusive data, you need to set the Device ID Number.
With the factory settings, the Device ID Number is set to 17. Normally, there is no need to change this setting when transmitting data to a sequencer, etc. If you wish to change the Device ID Number setting, use the following procedure.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "Device ID#."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to set the Device ID Number (1–32).

5. Press [EDIT].
The indicator will go out, and the previous display will reappear.

* Make a note of the Device ID Number on the label of the disk, etc. When re-transmitting the data recorded on the sequencer back to the XP-10, the Device ID Number of the XP-10 must match the Device ID Number of the recorded data. If the Device ID Number is different, the XP-10 will not receive the data.

Saving and selecting the Performance

Another way of ensuring that the song will be played back correctly is to save the Performance as a User Performance ("Storing a Performance" p.32). Then, select this Performance before you play back the song.

However if you later modify the Performance settings and save it again, the song will no longer play back correctly. To be sure that your song will always be played back using the correct Performance settings, we recommend that you use the other method (Performance Dump).

2) Make sure that system controller settings are the same for recording and playback

If the system controller settings (for example, the number of the Control Change message that is transmitted from MIDI OUT when Slider 1 is moved, etc., p.62) are different during recording and playback, the song will not play back correctly. After recording, be careful not to change the controller settings. If you do change the controller settings, make a note of this on the disk label, etc. Then, before playing back, restore the appropriate controller settings.

3) Use the same tempo for recording and playback

If you use the Performance Dump function to record Performance data in the beginning of your song, you will need to distinguish the tempo used when recording the Performance data and the tempo used when recording the music data (notes, etc.)

Tempo for recording the Performance data

Record the Performance data at the tempo that you will use for playback. For example if you will be playing the song back at a tempo of 120, record the Performance data at a tempo of 120.

If the Performance data is played back at a different tempo than the tempo at which it was recorded, the XP-10 may not receive it correctly, meaning that the song will not be played back correctly.

Tempo for recording the music data

It is not necessary to record the music data at the tempo that you will use for playback. For example if you will be playing the song back at a tempo of 120, you might want to record it at a slower tempo, and play it back at 120.

4) Things to avoid during recording

Do not perform the following operations during recording. If you perform these operations during recording, playback will not be correct even if you have used Performance Dump to record the Performance data.

1. Do not change Performances
2. Do not change the Keyboard Mode

Recording

When you finish making settings, you are ready to record.

Recording the Performance settings

Get the sequencer to start recording. Then, select the Performance that you will be using. The Performance settings will be transmitted from MIDI OUT and recorded on the sequencer.

Two or three seconds will be required to record the Performance settings. Continue recording blank space for an additional two or three seconds (i.e., without playing the keyboard or moving a controller, etc.). You must leave two or three seconds between the Performance data and the music data to ensure that the recorded song will be played back correctly.

Recording each Part

Select an appropriate Performance, and record each Part. Using the metronome function of the sequencer, we will record the drum part first. Then we will record each Part while listening to the drum part.

Cautions when playing back the song you record

In order for a song you record to be played back correctly, you need to observe four points. For details refer to "Playing back with the same setup as when recording" (p.46).

Please also observe the following three additional points.

1. Play back the recorded song on the XP-10. It will not play back correctly when played back using other sound sources.
2. Be sure to play back from the beginning of the song. If you play back from the middle of the song, playback will not be correct. In particular, if the Performance settings (Performance Dump) have been recorded at the beginning of the song, you must restore the Performance settings that were used when the song was recorded.
3. If you have used Performance Dump to record Performance data in the song, turn on the System Exclusive Receive switch. If the System Exclusive Receive switch is off, the XP-10 will not receive the Performance settings that were recorded at the beginning of the song. Use the following procedure to make settings. (When the XP-10 is shipped from the factory, this setting is ON. Normally you should leave it ON.)

Setting the System Exclusive Receive Switch

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "Rx System Excl."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to turn the setting "ON".

5. Press [EDIT].
The indicator will go out, and the previous display will reappear.

Transposing the playback of a song you recorded (Master Key Shift)

If you wish to transpose the playback of a song, use the Master Key Shift setting.

Setting the Master Key Shift

This setting will transpose all Parts except for the Drum Part. You can specify a transposition in semi-tone steps over a range of +/-2 octaves.

* This setting will also transpose data received at MIDI IN.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "MstrKeyShift."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to set the value (-24–+24).

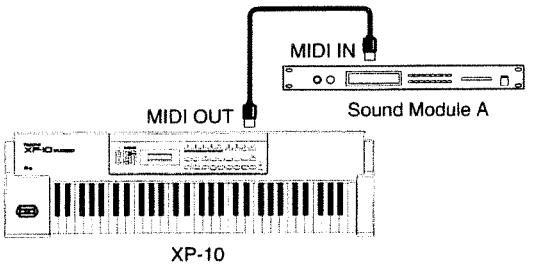
5. Press [EDIT].
The indicator will go out, and the previous display will reappear.

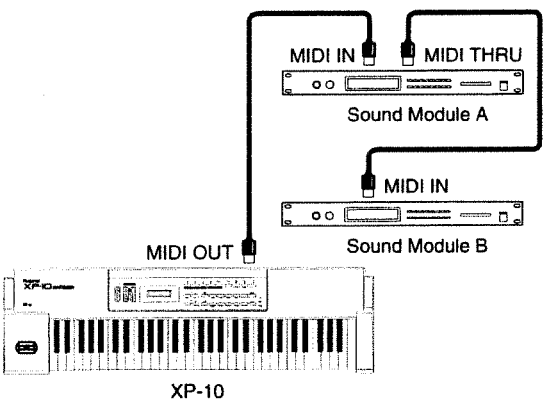
Adding other MIDI sound sources

Connections

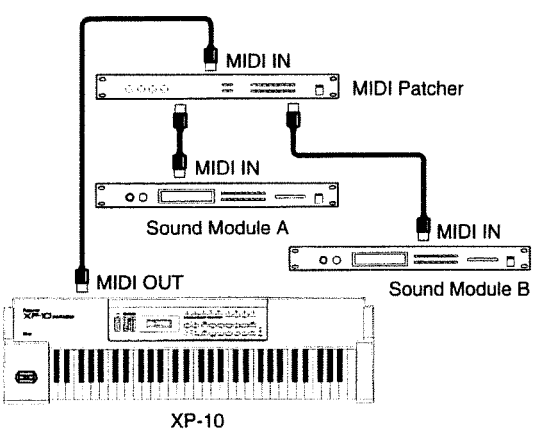
Make connections as shown below. If you play the XP-10 in this setup, both the XP-10 and the other sound source will sound in response to your playing.

* The MIDI THRU connector re-transmits all data that was received at MIDI IN.





If you connect two or more other MIDI sound sources, be aware that the MIDI signal will become increasingly degraded the further away it gets from the XP-10. This can cause data reception errors. If you wish to connect four or more devices, we recommend that you use a MIDI Patcher (sold separately: A-880) to make connections as shown below.



Setting the XP-10 Transmit Channel

Set the XP-10 Transmit Channel to match the Receive Channel of the other MIDI sound source. For details on setting the XP-10 Transmit Channel, refer to "Set/check the Keyboard Transmit Channel" (p.45).

Selecting sounds

In the section "Selecting sounds on another device using the XP-10" (p.40) of chapter 6, it was explained how you can select Tones or Drum Sets on the XP-10 to select sounds on the external MIDI sound source as well.

Normally you can select sounds as explained in chapter 6. However if you have connected the XP-10 to a GS Format compatible sound source, and wish to play the GS Format compatible sound source using the same sounds as on the XP-10, make settings as follows.

Tone

If you play XP-10 Original Tones or User Tones that you create by modifying Original Tones, the sounds will be different than the sounds of the GS Format compatible sound source.
This is because these sounds are not specified by the GS Format ("Types of Tone" p.16, "Tone list" p.71).
Set the User Bank Select Transmit switch to OFF, and select Tones on the XP-10. Use the following procedure to turn off the User Bank Select Transmit switch.

* The User Bank Select Transmit switch should normally be left ON. Turn it OFF only when you wish to use the XP-10 as discussed above.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "Tx UserBankSel."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to turn the setting OFF.

5. Press [EDIT].
The indicator will go out, and the previous display will reappear.

With the User Bank Select Transmit setting turned off, selecting an XP-10 Tone will cause a MIDI NRPN message (p.83) to be transmitted from MIDI OUT in addition to the MIDI sound-selecting messages. The NRPN message controls the way in which the GS Format compatible sound source will sound its Tones.

Drum Set

Select Drum Sets only from the Preset Drum Sets, and only from STANDARD–SFX sets which are defined in the GS Format.

* If Drum Sets other than these are selected on the XP-10, a GS Format compatible sound source will not produce the same sounds even if the User Bank Select Transmit switch is turned OFF.

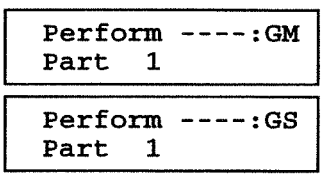
* "Types of Drum Set" (p.17), "Drum Set list" (p.74)

Using the XP-10 as a General MIDI System /GS Format compatible sound source

The XP-10 is compatible with the General MIDI System / GS Format. By connecting a sequencer and using the XP-10 as the sound source, you can play back a wide variety of commercially available Roland SMF Music Data.

About the display

When the XP-10 is functioning as a General MIDI System / GS Format compatible sound source, the Performance Select display will be as follows.
When General MIDI System is active, the right side of the display will indicate "GM."
When GS Format is active, the right side of the display will indicate "GS."



Playing back Roland SMF Music Data

There are two types of Roland SMF Music Data: General MIDI Score Data for playback using a General MIDI System compatible sound source, and GS Music Data for play back using a GS Format compatible sound source. The XP-10 can be used to play back either type of data. Before playing back Roland SMF Music Data, make or confirm the following settings.

Cautions for playback

When playing back Roland SMF Music Data, please observe the following 5 points.

1. To play back Roland SMF Music Data, use a sequencer that is able to play back Standard MIDI Files (SMF).

2. Set the System Setup parameter System Exclusive Receive switch ON. For details refer to "Setting the System Exclusive Receive Switch" (p.48).

3. When playing back GS Music Data, set the Device ID Number to 17. For details refer to "Setting the Device ID Number" (p.46). Roland GS Music Data uses Device ID Number 17.

4. When playing back GS Music Data, set the GS Reset Receive Switch ON. (With the factory settings this is on, and you should normally leave it on.) Use the procedure given below to turn the GS Reset Receive switch ON.

5. Be sure to begin playback from the beginning of the song. If you begin playback from the middle of the song, playback will not be correct. The beginning of the song contains data that resets the sound source to the required initial settings (General MIDI System On, GS Reset).

Turning on the GS Reset Receive switch

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "Rx GS Reset."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to turn the setting ON.

5. Press [EDIT].
The indicator will go out, and the previous display will reappear.

Creating your own song

The XP-10 is able to transmit General MIDI setup messages and GS setup messages from MIDI OUT. These messages will reset the sound source to the General MIDI System or GS Format initial settings. If you are creating a song for a General MIDI System / GS Format compatible sound source, record a General MIDI setup message or a GS setup message at the beginning of the song. If this data is included at the beginning of the song, the sound source will always be set appropriately, and the song will play back correctly.

* There are several points that you need to be aware of when recording General MIDI setup messages or GS setup messages, and when recording the musical data. For details refer to "Cautions for recording and playback".

What is General MIDI Setup data?

General MIDI Setup data consists of MIDI messages such as the following.

General MIDI System On
(System Exclusive message: F0H 7EH 7FH 09H 01H F7H)
The following values for Parts 1–16
Program number (CnH ppH)
Volume (CC#07: BnH 07H vvH)
Pan (CC#10: BnH 0AH vvH)
Reverb Send Level (CC#91: BnH 5BH vvH)
Chorus Send Level (CC#93: BnH 5DH vvH)
Pitch Bend Sensitivity (RPN, CC#06: BnH 65H 00H BnH 64H 00H BnH 06H vvH)
CC# : Control Change number
n : MIDI channel
pp : Program number
vv : data

What is GS Setup data?

GS Setup data consists of MIDI messages such as the following.

GS Reset
(System Exclusive message: F0H 41H 10H 42H 12H 40H 00H 7FH 00H 41H F7H)
Reverb macro
(System Exclusive message: F0H 41H 10H 42H 12H 40H 01H 30H vvH ssH F7H)
Chorus macro
(System Exclusive message: F0H 41H 10H 42H 12H 40H 01H 38H vvH ssH F7H)
The following values for Parts 1–16
Part name assigned as the Rhythm Part
(System Exclusive message: F0H 41H 10H 42H 12H 40H 1xH 15H vvH ssH F7H)
Bank number (CC#00, CC#32: BnH 00H vvH BnH 20H vvH)
Program number (CnH ppH)
Volume (CC#07: BnH 07H vvH)
Pan (CC#10: BnH 0AH vvH)
Reverb Send Level (CC#91: BnH 5BH vvH)
Chorus Send Level (CC#93: BnH 5DH vvH)
Pitch Bend Sensitivity (RPN, CC#06: BnH 65H 00H BnH 64H 00H BnH 06H vvH)
CC# : Control Change number
n : MIDI channel
pp : Program number
x : Part
vv : Data
ss : Check sum

Cautions for recording and playback

When recording and playing back, please observe the following eight points.

1. When recording General MIDI Setup data or a General MIDI System song, please observe the following points.

If you wish to transmit General MIDI Setup data, be sure that each Part in the currently selected Performance uses only Capital Tones from the Preset Tone bank. For Drum Sets, select a Standard Set. Also, when recording your playing, be sure to use only Capital Tones from the Preset Tone bank. For the Drum Set, use only notes B1–A5 (note numbers 35–81) of the Standard Set. Tones and Drum Sets other than these are not defined in the General MIDI System. This means that if you use such sounds, your song will not play back correctly on a General MIDI system compatible sound source.

* For details on the Tones of the XP-10, refer to "Types of Tone" (p.16) and "Tone list" (p.71). For details on Drum Sets, refer to "Types of Drum Set" (p.17) and "Drum Set list" (p.74).

2. When recording GS Setup data or a GS Format song, please observe the following points.
Before transmitting GS Setup data, be sure that the Parts of the currently selected Performance do not use XP-10 Original Tones or Drum Sets, or User Tone or User Drum Sets. Also, be careful not to play XP-10 Original Tones or Drum Sets, or User Tones or User Drum Sets while recording. These sounds are not specified by the GS Format. If you record using such sounds, your song will not play back correctly on a GS Format compatible sound source.

* For details on the Tones of the XP-10, refer to "Types of Tone" (p.16) and "Tone list" (p.71). For details on Drum Sets, refer to "Types of Drum Set" (p.17) and "Drum Set list" (p.74).

3. You must distinguish the tempo used when recording the General MIDI Setup / GS Setup data from the tempo used when recording the music data (notes, etc.)

Tempo for recording the General MIDI Setup / GS Setup data
Record this data at the tempo that you will use for playback. For example if you will be playing the song back at a tempo of 120, record the General MIDI Setup / GS Setup data at a tempo of 120.
If the General MIDI Setup / GS Setup data is played back at a different tempo than the tempo at which it was recorded, the XP-10 may not receive it correctly, meaning that the song will not be played back correctly.

Tempo for recording the music data
It is not necessary to record the music data at the tempo that you will use for playback. For example if you will be playing the song back at a tempo of 120, you might want to record it at a slower tempo, and play it back at 120.

4. When recording/playing back a GS Format song, set the Device ID Number to 17. For details refer to "Setting the Device ID Number"(p.46).

5. Two or three seconds will be required to record the General MIDI Setup / GS Setup data. Continue recording blank space for an additional two or three seconds (i.e., without playing the keyboard or moving a controller, etc.). You must leave two or three seconds between the General MIDI Setup / GS Setup data and the music data to ensure that the recorded song will be played back correctly.

6. Set the System Exclusive Receive Switch to ON. For the procedure, refer to "Setting the System Exclusive Receive Switch" (p.48).

7. When playing back a GS Format song, set the GS Reset Receive Switch ON. (With the factory settings this is on, and you should normally leave it on.) For the procedure, refer to "Turning on the GS Reset Receive switch" (p.50).

8. Be sure to play back the song from the beginning. If the song is played back from the middle, it will not play back correctly. The beginning of the song contains messages that are used to initialize the sound source (General MIDI setup or GS setup data). If you wish to play back a song that does not contain this data at the beginning, you will need to make reset the sound source of the XP-10 to the GS initial settings. For details refer to "Restoring the GS initial settings (GS Reset)" (p.38).

Transmitting General MIDI setup / GS setup data

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Tx Setup" and press [ENTER].

3. Use VALUE[-]/[+] to select "GM Setup" or "GS Setup."

4. Press [ENTER] to transmit the data.

* To cancel the operation, press [UTILITY]. The indicator will go out, and the previous display will reappear.

5. When transmission is completed, the display will indicate "Completed" and the [UTILITY] indicator will go out.

Returning from General MIDI System / GS Format back to synthesizer operation

If the XP-10 has been set to function as a General MIDI System / GS Format sound source as explained above, or if the XP-10 has received a General MIDI System On (p.50) or a GS Reset (p.50) from MIDI IN and is functioning as a General MIDI System / GS Format sound source, you can use one of the following methods to restore it to conventional synthesizer operation.

1. Re-select the currently selected Performance.

or,

2a. If in General MIDI System mode, transmit a General MIDI System Off (p.81) to the XP-10.
2b. If in GS Format mode, transmit an Exit GS Mode (p.81) to the XP-10.

Chapter 8. Using a Desktop Music System to create an ensemble

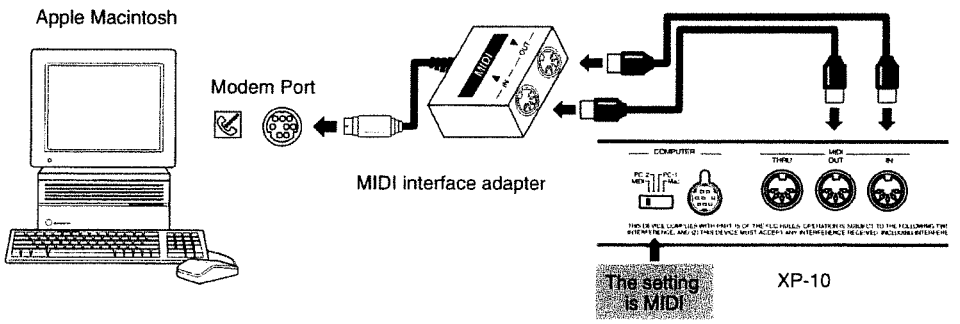
You can also enjoy ensemble playing with the XP-10 by connecting it to a personal computer that is running sequencing software, instead of using a sequencer. A system in which you use a personal computer to create and listen to music is referred to as a Desktop Music System (DTMS).
This chapter explains how to enjoy ensembles using a commercially-available sequencing software that has been installed on your computer.

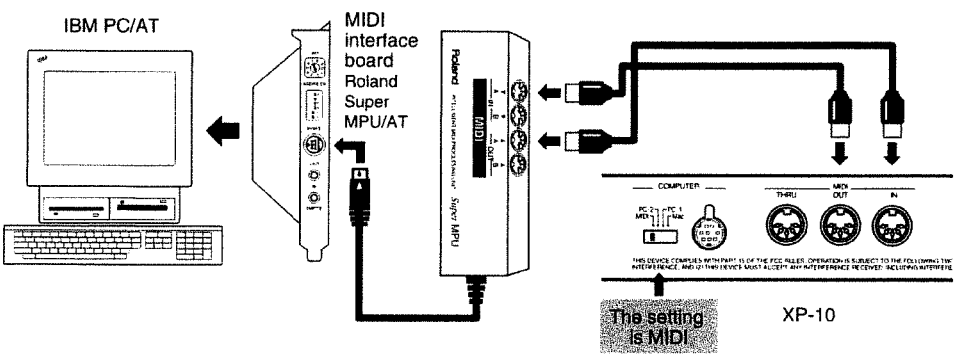
Two methods of connection

There are two ways to connect the XP-10 to your computer; using MIDI cables or using a computer cable.
If you use MIDI cables, you will need two MIDI cables. In addition you will need to install a MIDI interface board with MIDI connectors (such as the Roland Super MPU etc.: sold separately) or a MIDI interface adaptor into your computer.
If you use a computer cable, connections can be made directly using a single cable, but the sequencing software that you use must be compatible with the serial port (the communication connector located on the computer).

Connections using MIDI cables

Connect the XP-10 to your computer as follows.

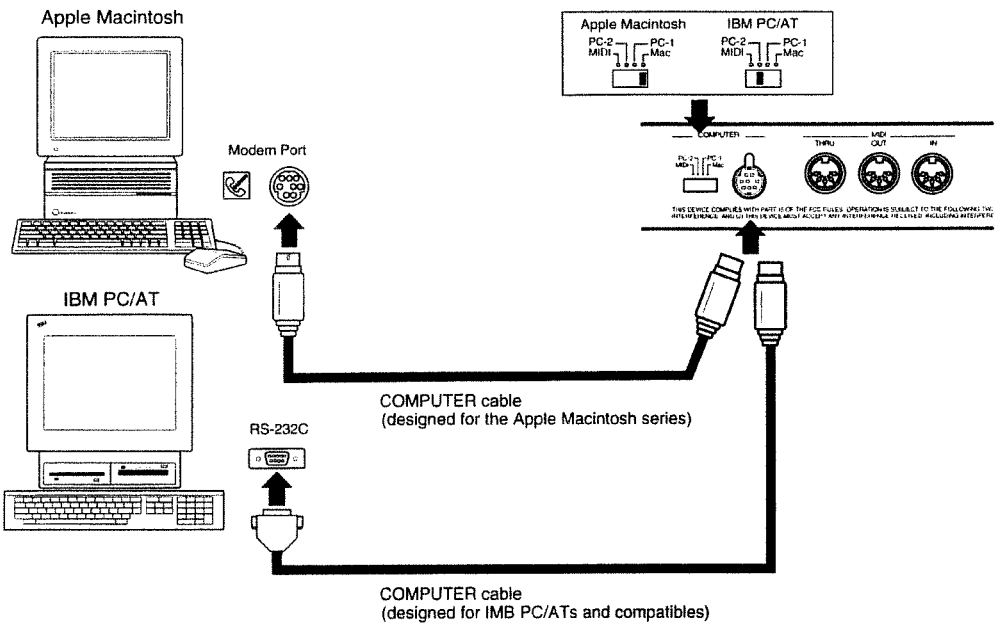




Connections using a computer cable

The type of computer cable you will use depends on the type of computer you have. For details on cables, refer to "Computer cable wiring diagram" (p.66).
Connect the XP-10 to your computer as follows.

* To prevent damage to your speakers etc., turn all volume controls to the minimum position and turn the power off for all devices before making connections.



Turning the power on/off

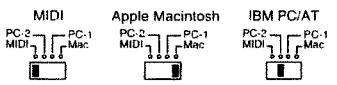
Turning the power on

When you finish making connections, turn the power on using the following procedure.

* Be sure that the volume controls of your amp and/or mixer are at the minimum position. This will prevent speakers etc. from being damaged by the noise that occurs when the power is turned on.

1. Set the XP-10's Computer switch.

* Change the setting of the Computer switch with the power turned off. If the power is on when you change the setting, the change will not be registered correctly.



If you are using MIDI cables to make connections, select "MIDI."
If you are using a computer cable to make connections, the setting of the Computer switch will depend on the type of computer and software that you are using.
If you are using an Apple Macintosh series computer, set the switch to "Mac." If you are using an IBM PC/AT type computer, set the switch to "PC-2."
The baud rate of PC-1 is 31.25K (bit/sec), and the baud rate of PC-2 is 38.4K (bit/sec). Set the Computer switch to the baud rate that your software requires. Refer to the manual for your software to determine the appropriate baud rate.

2. Turn on the XP-10 power.

* This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.

3. Turn on the computer power.

4. Turn on the amp/speaker power.

5. Adjust the volume controls of each device to an appropriate level.

When turning the power off, first lower all volume controls to the minimum position. Then turn off the power of each device in the reverse order that they were turned on.

* When you turn off the XP-10 power, the settings that you made (Performance, Tone, Drum Set) will be lost. Before turning off the power, remember to store the changes you made. For Performances, refer to "Selecting an entirely different set of XP-10 settings while you play (Performance)" (p.31). For Tones and Drum Sets, refer to Chapter 4 "Creating your own Tone or Drum Set" (p.34).

* When you turn off the computer power, the song you recorded will be lost. Before turning off the power, remember to save the song you recorded, and exit the sequencing software.

Before you use your sequencing software

For details on installing and using your sequencing software, refer to the manual for your software.

Cautions when using an IBM PC/AT type computer

Even if the XP-10 Computer connector and the computer are connected, the system will not operate correctly unless the software is compatible. Be sure that your software is compatible with the serial port of the computer.
In addition, various settings must be made on your computer. Refer to the manual for your software, and make the appropriate settings before use.

XP-10 settings and recording procedure

For details on XP-10 settings and the recording procedure, read from chapter 7 "Before you record" (p.44) to "Returning from General MIDI System / GS Format back to synthesizer operation" (p.52). (The section "Adding other MIDI sound sources" (p.48) is not relevant, and can be skipped.)

* References in this manual to "sequencer" should be read as "sequencing software" or "computer".

Chapter 9. Preventing notes of an important Part from being cut off (Voice Reserve)

The maximum number of simultaneous notes

The XP-10 can produce up to 28 notes (28 voices) simultaneously. However some Tones use two voices to produce one Tone. Each note played using such a Tone will decrease the remaining number of available voices by 2, not 1. Also, using a Keyboard Mode such as Dual will sound two Tones simultaneously, which will also affect the maximum number of simultaneous notes. For the number of voices used by each Tone, refer to "Tone list" (p.71).

The priority order of Parts

When the number of requested notes exceeds 28, notes played later will be given priority, and currently-sounding notes will be successively turned off. On the XP-10, each Part has a priority order, and notes will be turned off beginning with Parts that have a lower priority. Keep this in mind when you create songs, and use high-priority Parts for parts that are musically most important.

Note priority order	Part No.
1	10 (Drum Part)
2	1
3	2
4	3
5	4
6	5
7	6
8	7
9	8
10	9
11	11
12	12
13	13
14	14
15	15
16	16

Voice Reserve settings

If your song has one or more Parts that you don't want notes to be "stolen" from, use the following procedure to specify the number of voices that will be reserved for each Part. For example if you set a Voice Reserve setting of 6 for Part 1, Part 1 will be guaranteed 6 voices even when the total number of requested voices exceeds 28.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Part" and press [ENTER].

3. Press [9] several times to select "Voice Resv."

* If you hold down [ENTER] while you press [9], you will return to the previous item.

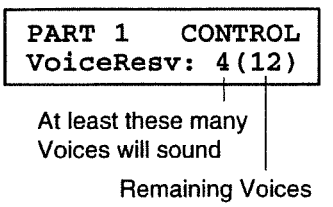
4. Use PART [◄]/[►] to select the Part for which you want to make settings.

* You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

5. Use VALUE[-]/[+] to set the Voice Reserve setting.

* If you wish to make settings for other Parts, repeat steps 4–5.

* Since the maximum number of simultaneous notes is 28, the total number of reserved voices for all Parts cannot exceed 28.



6. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Chapter 10. Using a sequencer or computer to save XP-10 settings (Bulk Dump)

The settings of the XP-10 can be transmitted to an external device as MIDI System Exclusive messages. This operation is called "Bulk Dump." The XP-10 can be connected to an external device such as a sequencer, and this operation used to save XP-10 settings on that device. Or, if you connect a second XP-10 in place of the sequencer, you can set both XP-10 units to the identical settings.

Connections

For connecting the XP-10 to a sequencer, refer to chapter 7 "Connections" (p.43). Using a MIDI cable, connect the XP-10's MIDI OUT to the sequencer's MIDI IN.
For connecting the XP-10 to a computer, refer to chapter 8 "Two methods of connections" (p.53). If you are using MIDI cables to make connections, connect the XP-10's MIDI OUT to the MIDI IN of the MIDI interface adapter/board.

Types of XP-10 data that can be transmitted

Bulk Dump allows you to transmit the following four types of data.

Tone Dump (User: Tone)
The settings for the 256 User Tones will be transmitted.

Drum Dump (User: Drum)
The settings for the 20 User Drum Sets will be transmitted.

Performance Dump (User: Performance)
The settings for the 64 User Performances will be transmitted.

Bulk Dump (All)
User Tone, User Drum Set, User Performance, and System Setup settings will be transmitted.

* System Exclusive Receive Switch setting will be transmitted as ON. Device ID Number and CTS/RTS (P.62) settings will not be transmitted.

Saving the transmitted data

Make Device ID Number settings

When transmitting and receiving Exclusive messages, the Device ID Number settings of the two devices must match. If you have connected two or more XP-10 units via MIDI, only those XP-10 units with the same Device ID Number will be able to exchange Exclusive messages. The Device ID Number functions in a way that is similar to the MIDI channel.
When the XP-10 is shipped from the factory, the Device ID Number is set to 17.
When transmitting data to a sequencer etc., there is normally no need to change this setting. If you need to change the Device ID Number setting, use the following procedure.
If you wish to set two XP-10 units to the same settings, use the following procedure to set the same Device ID Number on each XP-10.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "Device ID#".

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to set the Device ID Number (1–32).

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

* Be sure to make a note of the Device ID Number on the label of the disk, etc. When you later transmit the data that was saved back to the XP-10, you will need to set the XP-10's Device ID Number to the same number that was used when the data was transmitted. If the Device ID Number setting is different, the XP-10 will not receive the data.

Transmitting and saving the data

1. Press [UTILITY].
The indicator will light.

2. Use VALUE[-]/[+] to select "Bulk Dump" and press [ENTER].

3. Use VALUE[-]/[+] to select the desired type of Bulk Dump.

* If you wish to cancel the operation, press [UTILITY]. The indicator will go off, and the previous display will reappear.

4. Set the sequencer etc. ready to record.

* Be sure to make a note (on the label of the disk, etc.) indicating the sequencer tempo that was used during recording. When you re-transmit the saved data back to the XP-10, you must play back the sequencer at the same tempo. If the tempo is different, the XP-10 may not receive the data correctly.

5. Press [ENTER], and transmission will begin.

* If you wish to interrupt transmission, press [CANCEL].

6. When transmission is complete, the display will indicate "Completed" and the [UTILITY] indicator will go off.

* When executing "Performance Dump (User: Performance)," the data will be transmitted regardless of the on/off setting of the System Setup parameter "Performance Dump Transmit Switch."

Re-transmitting the saved data back to the XP-10 (Bulk Load)

Here's how to retransmit the data (Exclusive data) that was saved on the sequencer back to the XP-10. This operation is called "Bulk Load."
When you execute Bulk Load, the contents of the user area (the location where data that you create, such as User Tones, is stored) may be lost, depending on the type of data that is being Bulk Loaded. For example, if the XP-10 receives the contents of a "Drum Dump (User: Drum)," the settings of the 20 User Drum Sets will be lost.
If you wish to preserve important data, use "Bulk Dump (All)" to save your data to a sequencer etc. After saving your data, you can use the following procedure to load the data.

Connections

For connecting the XP-10 to a sequencer, refer to chapter 7 "Connections" (p.43). Using a MIDI cable, connect the XP-10's MIDI IN to the sequencer's MIDI OUT.
For connecting the XP-10 to a computer, refer to chapter 8 "Two methods of connections" (p.53). If you are using MIDI cables to make connections, connect the XP-10's MIDI IN to the MIDI OUT of the MIDI interface adapter/board.

Set the Device ID Number and the System Exclusive Receive Switch

Before you Bulk Load from a sequencer etc. into the XP-10, you need to make "Device ID Number" and "System Exclusive Receive Switch" settings using the following procedure.

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] several times to select "Device ID#."

* If you hold down [ENTER] while you press [7], you will return to the previous item.

4. Use VALUE[-]/[+] to set the Device ID Number to the same setting as when you executed Bulk Dump.

5. Press [7] several times to select "Rx System Excl."

6. Use VALUE[-]/[+] to turn the setting "ON."

7. Press [EDIT].
The indicator will go off, and the previous display will reappear.

Re-transmitting the saved data back to the XP-10

When you have finished making settings, play back the sequencer etc. to re-transmit the data back to the XP-10. Be sure to play back the sequencer at the same tempo that was used when the data was recorded. If the tempo is different, the XP-10 may not receive the data correctly.

Chapter 11. List of functions

The XP-10 allows you to make detailed settings for a large number of functions, as has been explained in chapters 1–10. Chapter 11 gives a complete list of all available functions on the XP-10.

* Functions which were already explained in chapters 1–10 will not be explained in detail in this chapter. For details refer to the appropriate section in chapters 1–10.

List of Performance parameters

The settings that are stored as part of a Performance can be grouped in two categories; "Common" settings which are common to all Parts, and "Part" settings which are made for each Part.

Setting procedure

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "Perform Common" or "Perform Part" and press [ENTER].

3. Press a numeric key [6]–[0] several times to select the function whose setting you wish to change.

* If you hold down [ENTER] while you press [6]–[0], you will return to the previous item.

* To make settings for different Parts, use PART [◀] /[▶] to select the Part. You will be able to select only two Parts (Upper Part and Lower Part) if the Keyboard Mode (p.19) is set to Dual, X-dual, or Split.

4. Use VALUE[-]/[+] to set the value.

* If you wish to make settings for other functions, repeat steps 3–4.

* If you wish to make settings for other Parts, repeat steps 3–4.

5. Press [EDIT].
The indicator will go out, and the previous display will reappear.

Settings common to the entire Performance (Perform Common)

Sound-related settings ([6]: LEVEL/EFFECT)

Volume setting (Level)
Setting: 0–127
Set the volume of the entire Performance.

Chorus type (CHORUS Type)
Setting: CHORUS1–4, FBK CHORUS, FLANGER, SHORT DELAY, S DELAY FB
("Selecting the Chorus/Reverb type" p.25)

Chorus depth (CHORUS Level)
Setting: 0–127
("Adjusting the Chorus/Reverb depth for the Tones of all Parts" p.25)

Reverb type (REVERB Type)
Setting: ROOM1–3, HALL1–2, PLATE, DELAY, PAN DELAY
("Selecting the Chorus/Reverb type" p.25)

Reverb depth (REVERB Level)
Setting: 0–127
("Adjusting the Chorus/Reverb depth for the Tones of all Parts" p.25)

MIDI-related settings ([7]: MIDI)

Transmit Channel selection (Tx Channel)
Setting: PART, 1–16
("Set/check the Keyboard Transmit Channel" p.45)

Tone Change Receive Switch on/off (Rx Tone Change)
Setting: ON, OFF
("Turn on the Tone Change Receive Switch" p.45)

Keyboard settings ([8]: KEYBOARD)

Transposition amount (Transpose)
Setting: -24–+24
("When to use transposition (Transpose and Key Shift)" p.27)

Split point (Split Point)
Setting: C2–C#7
("Playing two Tones from the keyboard (Keyboard Mode)" p.19, "Setting the Split Point" p.20)

Upper Part (Upper Part)
Setting: 1–16
("Selecting Parts" p.19)

Lower Part (Lower Part)
Setting: 1–16
("Selecting Parts" p.19)

Control settings ([9]: CONTROL)

X-dual controller selection (X-DUAL Ctrl)
Setting: PEDL, MOD, SLDE
("Changing the X-dual controller" p.20, "About the XP-10's controllers" p.30)

Modulation Lever function (MOD Asgn)
Setting: VIBRATO, ENV TIME, PORTA TIME, CUTOFF, RESONANCE, RESO+CUTOFF, RESO-CUTOFF, R/RESO-CTOF
("Using the Modulation Lever to modify the sound" p.28, "About the XP-10's controllers" p.30)

Modulation Lever depth (MOD Depth)
Setting: -64–+63
("Setting the depth of the Modulation Lever effect" p.29)

Pedal function (PEDAL Asgn)
Setting: HOLD, EXPRESSION, ENV TIME, PORTA TIME, CUTOFF, RESONANCE, RESO+CUTOFF, RESO-CUTOFF, R/RESO-CTOF
("Using a pedal to modify the sound" p.29, "About the XP-10's controllers" p.30)

Pedal function depth (PEDAL Depth)
Setting: -64–+63
("Setting the depth of the pedal effect" p.29)

Combination Palette Slider function (SLIDER Asgn)
Setting: F-LFO I LFO-R, A-LFO I LFO-R, CUTOF I RESO, ATTCK I RELES, CHORS I REVRB, RS-CO I PORTA
("Using the Combination Palette Sliders to modify the sound" p.30, "About the XP-10's controllers" p.30)

Arpeggio-related functions ([0]: ARPEGGIO)

("Creating an arpeggio pattern" p.21, "Arpeggiator parameters you can set" p.21)

Arpeggio style (Style)
Setting: 1/4, 1/6, 1/8, 1/12, 1/16, 1/32, GLISSANDO, SEQUENCE A–C, ECHO, WALTZ, SWING WALZ, SYN BASS, HEAVY SLAP, LIGHT SLAP, WALK BASS, SNGL CUT'N, CHRD CUT'N, STRM CUT'N, REGGAE, PIANO BKNG, CLAVI CHRD, PERCUSSION, STRUMMING, HARP, SHAMISEN, BOUND BALL, RANDOM, LIMITLESS

Order in which chord notes will sound (Motif)
Setting: SINGLE UP, SINGL DOWN, SNGL UP&DW, SNGL RANDM, DUAL UP, DUAL DOWN, DUAL UP&DW, DUL RANDOM, NOTE ORDER, GLISSANDO, CHORD, BAS+CHORD1–5, BASS+UP1–8, BASS+RND1–3, TOP+UP1–6

Beat Pattern (Beat Ptrn)
Setting: 1/4, 1/6, 1/8, 1/12, 1/16 1–3, 1/32 1–3, SEQ-A1–6, SEQ-B1–4, SEQ-C1–2, ECHO1–3, MUTE01–12, CUT1–2, REGGAE, REF1–2, PERC1–4, WALKBS, STRUM1–2, HARP, BOUND, RANDOM

Tempo (Tempo)
Setting: 20–250

Octave Range (Octave Range)
Setting: -3–+3

Keyboard control of note loudness (Key Velo)
Setting: 1–127, REAL

Shuffle Rate (Shuffle Rate)
Setting: 50–90%

Groove Rate (Groove Rate)
Setting: 0–100%

Slider 1 function (Slider 1)
Setting: INT TMPO, SHUFFL R, GROOVE R
("About the XP-10's controllers" p.30)

Slider 2 function (Slider 2)
Setting: INT TMPO, SHUFFL R, GROOVE R
("About the XP-10's controllers" p.30)

Synchronization source (Sync Source)
Setting: INT, MIDI

Settings made independently for each Part (Perform Part)

Sound-related settings ([6] LEVEL/PAN/EFFECT)

Volume (Level)
Setting: 0–127
Specify the volume of each Part.

Stereo position of the sound (Pan)
Setting: RND, L63–R63
When stereo output is used, this setting sets the pan position (stereo location) of each Part. As the "L" setting is increased the sound will move further to the left, and as the "R" setting is increased, further to the right. A setting of RND (random) will produce a special effect in which the location of the sound will jump randomly for each note.

* For the Drum Sets, the stereo location of each percussion instrument is fixed ("What aspects of a Drum Set can be modified?" p.35). When you adjust the Pan setting of a Drum Part, the stereo location of the entire Drum Set will move.

Chorus Depth (Chorus Depth)
Setting: 0–127
("Adjusting the Chorus/Reverb depth for the Tones of an individual Part" p.25)

Reverb Depth (Reverb Depth)
Setting: 0–127
("Adjusting the Chorus/Reverb depth for the Tones of an individual Part" p.25)

MIDI- and pitch-related settings ([7]: MIDI/TUNE)

Receive Channel setting (Rx Channel)
Setting: 1–16, OFF
("Receive Channel" p.45)

Transposition amount – Key Shift (Key Shift)
Setting: -24–+24
("When to use transposition (Transpose and Key Shift)" p.27)

Scale Tune on/off (Scale Tune)
Setting: ON, OFF
("Changing from equal temperament to Pure Temperament or an Arabic scale" p.32, "Turning Scale Tune on/off" p.33)

Keyboard-related settings ([8]: KEYBOARD)

Keyboard Velocity Sensitivity (Velo Sens)
Setting: 0–127
("Adjusting how your keyboard playing dynamics affect the volume (Velocity Sensitivity)" p.26)

Solo on/off (Solo Switch)
Setting: ON, OFF
("Playing single-note lines (Solo)" p.26)

Portamento Time (Porta Time)
Setting: OFF, 1–127
("Creating smooth pitch changes between notes (Portamento Time)" p.26)

Control-related settings ([9]: CONTROL)

Pitch Bend Range (Bend Range)
Setting: 0–+24
("Raising and lowering the pitch in real time (Bend Range)" p.28)

Voice Reserve (Voice Resv)
Setting: 0–28
("Preventing notes of an important Part from being cut off (Voice Reserve)" p.56)

Selecting the sound played by the keyboard (Tone Type)
Setting: TONE, DRUM1, DRUM2
("Selecting a Drum Set" p.18)

Parameters set by the front panel buttons

Keyboard Mode, Arpeggio, and Transpose settings (on/off) that you make using the front panel buttons can be saved as part of a Performance. The following parameters can be saved.

KEYBOARD MODE
Setting: SINGLE, DUAL, X-DUAL, SPLIT
("Playing two Tones from the keyboard (Keyboard Mode)" p.19)

ARPEGGIO
Arpeggio on/off
Setting: ON, OFF
("Turning a chord into an arpeggio" p.21)
PALETTE SELECT
Setting: ON, OFF
("Changing the arpeggiator pattern while you play" p.24)

TRANSPOSE
Setting: ON, OFF
("Turning Transpose on/off" p.27)

List of settings applying to the entire XP-10 (System Setup)

Setting procedure

1. Press [EDIT].
The indicator will light.

2. Use VALUE[-]/[+] to select "System Setup" and press [ENTER].

3. Press [7] or [9] several times to select the function that you wish to set.

* If you hold down [ENTER] while you press [7] or [9], you will return to the previous item.

4. Use VALUE[-]/[+] to set the value.

* If you wish to make settings for other functions, repeat steps 3–4.

5. Press [EDIT].
The indicator will go off, and the previous display will reappear.

* System Setup settings will remain in effect even if you change Performances.

List of settings

MIDI- and pitch-related settings ([7]: MIDI/TUNE)

Local Control on/off (Local)
Setting: ON, OFF
("Turn off the XP-10's Local Control" p.44)

GS Reset Receive Switch on/off (Rx GS Reset)
Setting: ON, OFF
This setting determines whether or not the XP-10 will receive the GS Reset message that resets the XP-10 to the GS basic settings.
("Cautions for playback" p.49)

System Exclusive Receive Switch on/off (Rx System Excl)
Setting: ON, OFF
("Setting the Exclusive Receive Switch" p.48)

Performance Dump Transmit Switch on/off (Tx PerformDump)
Setting: ON, OFF
("Recording the Performance settings" p.46)

User Bank Select Transmit on/off (Tx UserBankSel)
Setting: ON, OFF
("Selecting sounds" p.49)

Device ID Number (Device ID#)
Setting: 1–32
("Setting the Device ID Number" p.46)

Control Change number transmitted/received by Slider 1 (Slider 1 CC#)
Setting: 1–31, 64–95
This setting determines the number of the Control Change message that is transmitted from MIDI OUT when Slider 1 is moved.
("Make sure that system controller settings are the same for recording and for playback" p.47)

Control Change number transmitted/received by Slider 2 (Slider 2 CC#)
Setting: 1–31, 64–95
This setting determines the number of the Control Change message that is transmitted from MIDI OUT when Slider 2 is moved.
("Make sure that system controller settings are the same for recording and for playback" p.47)

Control Change number transmitted/received by the pedal (Pedal CC#)
Setting: 1–31, 64–95
This setting determines the number of the Control Change message that is transmitted from MIDI OUT when the pedal is moved.
("Make sure that system controller settings are the same for recording and for playback" p.47)

CTS/RTS on/off (CTS/RTS)
Setting: ON, OFF
If MIDI messages are not transmitted/received correctly when you have connected a computer using a computer cable, turn the setting ON. The setting is automatically turned OFF when the XP-10 power is turned on.

Master Key Shift (MstrKeyShift)
Setting: -24–+24
("Transposing the playback of a song you recorded (Master Key Shift)" p.48)

Master Tune (MasterTune)
Setting: 415.3–466.2 Hz
("Adjusting the pitch to other instrument" p.15)

Scale Tune (ScaleTune C – ScaleTune B)
Setting: -64–+63
("Changing from equal temperament to Pure Temperament or an Arabic scale (Scale Tune)" p.33)

Control-related settings ([9]: CONTROL)

Adjusting the display contrast (LCD Contrast)
Setting: 1–4
This adjusts the brightness of the display. Set it so that the display is easiest to read.

Chapter 12. Appendix

Troubleshooting

If there is no sound, or if the XP-10 does not function as you expect, first check the following points. If this does not resolve the problem, contact your dealer or qualified Roland service personnel.

Power does not turn on

Is the AC adaptor correctly connected to an AC outlet and to the XP-10?
Check the AC adaptor connections.

No sound / Volume is weak

Is the power turned on for the other devices which are connected?
Make sure that the power is turned on for your amp/mixer system.

Is the volume turned down?
Check the volume of the XP-10 and the volume of your amp/mixer system.

Is there sound in the headphones?
If there is sound in the headphones, the problem may be that the connecting cables are broken or that the amp or mixer is malfunctioning. Check the cables and equipment once again.

Is ROM Play mode selected?
Either simultaneously press VALUE[+] and [USER/PRESET], or press [EXIT] to exit ROM Play mode.

Is Local Control turned off?
Turn Local Control ON (p.44).

Are the volume (Level) settings of the Performance and of each Part turned down?
Check the Performance Level (p.50) and each Part Level (p.60) setting.

Has a Volume message from an external device turned down the volume setting of a Part?
Set the Level (p.60) of the Part.

Does the Transmit Channel match the Receive Channel?
Check the Transmit Channel (p.45) and the Receive Channel (p.45).

Has a Tone or Drume Set which does not exist on the XP-10 been selected using an external device?
Check the Tone or Drum Set list (p.71, p.74), and re-select the Tone or Drum set.

Pitch is incorrect

Has Transpose been turned on?
Press [TRANSPOSE] to turn it off.

Is the Key Shift setting correct?
Check the setting (p.27).

Is Scale Tune turned on?
Turn off Scale Tune (p.33).

Is the Master Key Shift setting correct?
Check the setting (p.48).

Is the Master Tune setting correct?
Check the setting (p.15).

Has a Pitch Bend message been received from an external device, causing the pitch to "stick"?
Move the Pitch Bender.

Cannot select Tones

Is Local Control turned off?
Turn on Local Control (p.44).

Is the Tone Change Receive Switch turned off?
Turn on the Tone Change Receive Switch (p.45).

Effects (Chorus/Reverb) are not applied

Is the Chorus Level / Reverb Level or the Chorus Depth / Reverb Depth set too low?
Check the settings of Chorus Level / Reverb Level (p.25) and Chorus Depth / Reverb Depth (p.25).

Controllers (Pitch Bender, Modulation Lever, Pedal, Slider) do not apply the desired effect

Since the XP-10 has a limited number of controllers, each one performs two or more functions. This means that the function being controlled by a controller will depend on the mode that the XP-10 is in. For details refer to "About the XP-10's controllers" (p.30).

Notes "drop out"

Is the Solo Switch on?
If the Solo Switch (p.26) is on, only one note at a time will sound even if you press two or more keys. If you wish to play two or more notes at once, turn off the Solo Switch.

The XP-10 is able to produce up to 28 notes at once. It cannot play a larger number of notes simultaneously. Reduce the number of Tones that you are using, and/or adjust the Voice Reserve (p.56) settings.

MIDI messages are not received correctly

Is the Receive Channel setting correct?
Check the Receive Channel (p.45) setting.

Are the various Receive Switch settings correct?
Check the settings of the Tone Change Receive Switch (p.45), the GS Reset Receive Switch (p.50), and the System Exclusive Receive Switch (p.48).

Is the Device ID Number setting correct?
Set the Device ID Number to the setting it had when you recorded the Exclusive data on the sequencer (p.46).

Is the sequencer playback tempo correct?
Play back the sequencer at the tempo that was used when recording the Exclusive data (p.47).

Is the Computer switch set correctly?
If a MIDI device is connected, set the switch to MIDI (p.43).
If you have connected a computer using MIDI cables, set the switch to MIDI (p.55).
If you have connected a computer using a computer cable, set the switch to Mac, PC-1, or PC-2 (p.55), depending on the type of your computer and sequencing software.

If MIDI messages are not received correctly when you have connected a computer using a computer cable, turn the CTS/RTS setting ON (P.62).

MIDI messages are not transmitted correctly

Is the Transmit Channel setting correct?
Check the Transmit Channel setting (p.45).

Are the various Transmit switches set correctly?
Check the settings of the Performance Dump Transmit Switch (p.46) and the User Bank Select Transmit Switch (p.49).

Is the Computer switch set correctly?
If a MIDI device is connected, set the switch to MIDI (p.43).
If you have connected a computer using MIDI cables, set the switch to MIDI (p.55).
If you have connected a computer using a computer cable, set the switch to Mac, PC-1, or PC-2 (p.55), depending on the type of your computer and software.

If MIDI messages are not transmitted correctly when you have connected a computer using a computer cable, turn the CTS/RTS setting ON (P.62).

Cannot use [SEQ CTRL] to control playback/stop on your sequencer

Have the settings related to sequencer synchronization been made correctly? Also, be aware that [SEQ CTRL] cannot control all sequencers (p.43).

Cannot correctly playback a recorded song

Is the song being played back from the beginning?
Play back the song from the beginning.

Have the Performance settings (Performance Dump) been recorded at the beginning of the song?
Record the Performance settings (Performance Dump) used by that song at the beginning of the song (p.46).
Alternatively, you can store the Performance used by that song as a User Performance before you begin recording. Then, before you play back the recorded song, select that Performance (p.46).

If you have created your own General MIDI System or GS Format compatible song, has a General MIDI Setup message or a GS Setup message been recorded at the beginning of the song?
Record a General MIDI Setup message or a GS Setup message at the beginning of the song (p.50).

Error messages

If you perform an incorrect operation or if an operation could not be executed correctly, an error message will appear in the display. Refer to this list, and take the appropriate action for the error message that was displayed.

When the battery runs down

```
Battery Low!
```

Situation: The internal backup battery has run down.
Action: Contact a nearby qualified Roland service personnel.

When other MIDI devices are connected

```
MIDI Buff. Full!
```

Situation: More MIDI data was received in a short time than could be processed.
Action: Reduce the amount of MIDI data that is being transmitted.

Situation: Exclusive data was not received correctly.
Action: After checking the condition of the MIDI cables and of the data being transmitted, re-do the operation.

```
MIDI Off Line!
```

Situation: It is possible that a MIDI cable has been disconnected or is broken.
Action: Check the connections or try a different MIDI cable.

```
Check Sum Error!
```

Situation: Exclusive data was not received correctly. It is possible that the Check Sum value was incorrect, or that a MIDI cable is broken.
Action: Check the value of the Check Sum. If it is incorrect, correct the value and re-do the operation.
Action: Try the operation once again using a different MIDI cable.
Action: If another MIDI device (such as a device with a MIDI Thru function) is connected between the transmitting and the receiving device, disconnect that MIDI device, and connect the transmitting and receiving devices directly. Then try the operation once again.

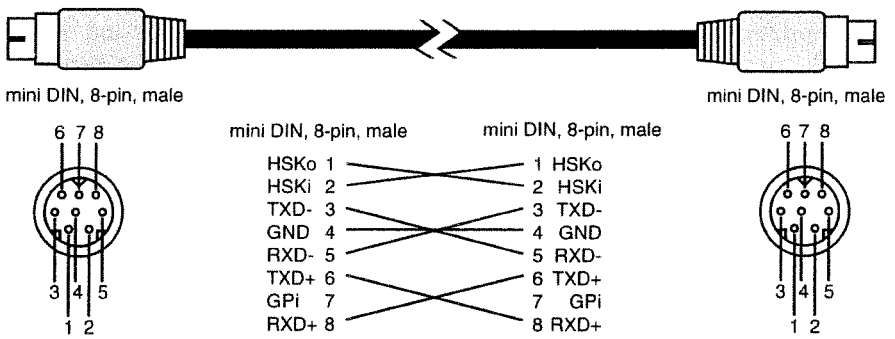
If the same error message appears in spite of this, contact a nearby qualified Roland service personnel.

```
No sound!!
   on this Bank
```

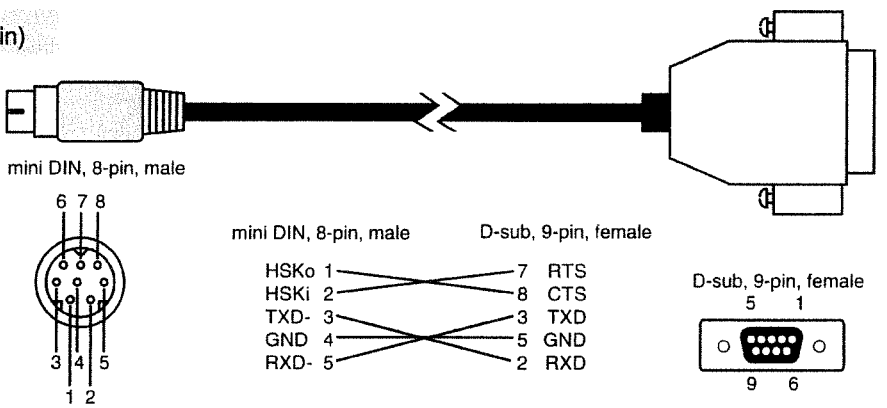
Situation: A sound select message that the XP-10 received at MIDI IN has specified a Tone or Drum Set that the XP-10 does not have.
Action: Check the sound select message, and change it so that it selects a Tone or Drum Set that the XP-10 has (p.71–77).

Computer cable wiring diagram

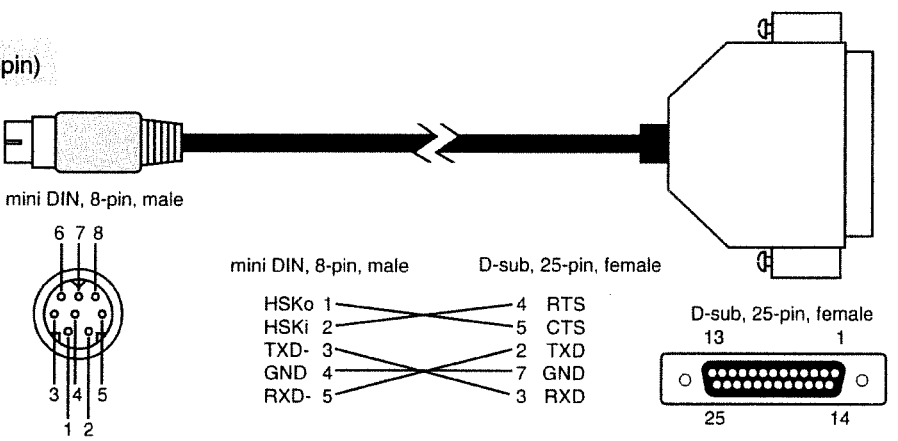
For Apple Macintosh



For IBM PC/AT (9-pin)



For IBM PC/AT (25-pin)



Parameter list

Performance parameters common to all Parts (Perform Common)

Parameter Name		Value
Level		0—127 (127)
Chorus	Type	CHORUS1—4 (CHORUS3), FBK CHORUS, FLANGER SHORT DELAY,S DELAY FB
	Level	0—127 (64)
Reverb	Type	ROOM1—3 (HALL2), HALL1—2, PLATE, DELAY, PAN DELAY
	Level	0—127 (64)
MIDI	Tx Channel	PART, 1—16 (PART)
	Rx Tone Change	ON, OFF
Keyboard	Transpose	-24—+24 (-12)
	Split Point	C2—C#7 (C4)
	Upper Part	1—16 (1)
	Lower Part	1—16 (16)
Control	X-dual Ctrl	PEDL, MOD, SLDE
	Mod Asgn	VIBRATO, ENV TIME, PORTA TIME, CUTOFF, RESONANCE RESO+CUTOFF, RESO-CUTOFF, R/RESO-CTOF
	Mod Depth	-64—+63
	Pedal Asgn	HOLD, EXPRESSION, ENV TIME, PORTA TIME, CUTOFF RESONANCE, RESO+CUTOFF, RESO-CUTOFF, R/RESO-CTOF
	Pedal Depth	-64—+63
	Slider Asgn	F-LFO I LFO-R, A-LFO I LFO-R, CUTOF I RESO, ATTCK I RELES CHORS I REVRB, RS-CO I PORTA
Arpeggio	Style	1/4, 1/6, 1/8, 1/12, 1/16, 1/32, GLISSANDO, SEQUENCE A—C ECHO, WALTZ, SWING WALZ, SYN BASS, HEAVY SLAP, LIGHT SLAP WALK BASS, SNGL CUT'N, CHRD CUT'N, STRM CUT'N, REGGAE PIANO BKNG, CLAVI CHRD, PERCUSSION, STRUMMING, HARP SHAMISEN, BOUND BALL, RANDOM, LIMITLESS
	Motif	SINGLE UP, SINGL DOWN, SNGL UP&DW, SNGL RANDM , DUAL UP DUAL DOWN, DUAL UP&DW, DUL RANDOM, NOTE ORDER GLISSANDO, CHORD, BAS+CHORD1—5, BASS+UP1—8, BASS+RND1—3 TOP+UP1—6
	Beat Ptrn	1/4, 1/6, 1/8, 1/12, 1/16 1—3, 1/32 1—3, SEQ-A1—6, SEQ-B1—4 SEQ-C1—2, ECHO1—3, MUTE01—12, CUT1—2, REGGAE, REF1—2 PERC1—4, WALKBS, STRUM1—2, HARP, BOUND, RANDOM
	Tempo	20—250
	Octave Range	-3—+3
	Key Velo	1—127, REAL
	Shuffle Rate	50—90
	Groove Rate	0—100
	Slider1	INT TMPO, SHUFFL R, GROOVE R
	Slider2	INT TMPO, SHUFFL R, GROOVE R
	Sync Source	INT, MIDI
Keyboard Mode		SINGLE (SINGLE), DUAL, X-DUAL, SPLIT
Arpeggio		ON, OFF
	Palette select	ON, OFF
Transpose		ON, OFF (OFF)

( ) : GS initial setting (GS Reset)
Parameters without ( ) are not affected by receiving a GS Reset.

Performance parameters set for each Part (Perform Part)

Parameter Name		Value
Level		0—127 (100)
Pan		RND, L63—R63 (0)
Chorus Depth		0—127 (0)
Reverb Depth		0—127 (40)
MIDI	Rx Channel	1—16, OFF (same as part number)
Tune	Key Shift	-24—+24 (0)
	Scale Tune	ON, OFF (OFF)
keyboard	Velo Sens	0—127 (64)
	Solo Switch	ON, OFF (OFF)
	Porta Time	OFF, 1—127 (OFF)
Control	Bend Range	0—+24 (+2)
	VoiceResv	0—28 (Part 1=6, Part 2—10=2, Part 11—16=0)
	Tone Type	TONE, DRUM1, DRUM2 (Part 10=DRUM1, Parts except Part 10=TONE)

Tone parameters (Tone)

Parameter Name		Value
Vibrato	Vib Rate	-50—+50 (0)
	Vib Depth	-50—+50 (0)
	Vib Delay	-50—+50 (0)
Filter	FilterCutoff	-50—+16 (0)
	Filter Reso	-50—+50 (0)
Envelope	Env Attack	-50—+50 (0)
	Env Decay	-50—+50 (0)
	Env Release	-50—+50 (0)

Drum Set parameters (Drum)

Parameter Name	Value
Pitch	-24—+24
Level	0—127
Pan	RND, L63—R63
Reverb Depth	0—127

Parameters affecting the entire XP-10 (System Setup)

Parameter Name		Value
MIDI	Local	**ON**, OFF
	Rx GS Reset	**ON**, OFF
	Rx System Excl	**ON**, OFF
	Tx PerformDump	ON, **OFF**
	Tx UserBankSel	**ON**, OFF
	Device ID#	1—**17**—32
	Slider1 CC#	1—**16**—31, 64—95
	Slider2 CC#	1—**17**—31, 64—95
	Pedal CC#	1—**4**—31, 64—95
	CTS/RTS	ON, **OFF**
Tune	MstrKeyShift	-24—**0**—+24
	MasterTune	415.3—**440.0**—466.2 (440.0)
	ScaleTune(C—B)	-64—**0**—+63
Control	LCD Contrast	1—**2**—4

Bold : factory setting
( ) : GS initial setting (GS Reset)
Parameters without ( ) are not affected by receiving a GS Reset.

Performance list

Preset Performance

No.	Contents		
1	Dual	U:Piano 3, L:Orchestra	
2	Dual	U:SA E.Piano 2, L:Soft Pad	
3	Split	U:MellowRhodes, L:Fingered Bs2	/Arpeggio
4	Split	U:Clav., L:Fingered Bs2	/Arpeggio
5	X-Dual	U:DistOrg.Fast, L:DistOrg.Slow	
6	Single	1:Full Organ	/Arpeggio
7	X-Dual	U:Clav., L:Synth Bass 1	
8	Dual	U:Nylon+Steel, L:Tron Flute	
9	Dual	U:Feedback Gt2, L:Gt.Harmonics	
10	Dual	U:Clean Gt., L:12-str.Gt2	
11	Dual	U:Nylon Gt.3, L:SoftBellPad	
12	Dual	U:SH101 Bs 2, L:Funk Gt.2	
13	Single	1:Clean Gt.	/Arpeggio
14	Split	U:Power Guitar, L:Fingered Bs3	/Arpeggio
15	Single	1:Nylon-str.Gt	/Arpeggio
16	Split	U:Harmonica, L:Steel-strGt2	/Arpeggio
17	Single	1:PizzicatoStr	/Arpeggio
18	Split	U:Tron Flute, L:Tron Strings	
19	Dual	U:OB Brass, L:P5 Saw Lead	
20	Split	U:Brass 2, L:Slap Bass 2	/Arpeggio
21	Dual	U:BreathyTenor, L:Twin Trumpet	
22	Split	U:Flute 2, L:12-str.Gt2	/Arpeggio
23	Dual	U:Tp & Sax, L:MutedTrumpet	/Arpeggio
24	Dual	U:JP8 Square, L:Muted Clav.	
25	Dual	U:LFO Saw, L:FM Lead	/Arpeggio
26	Dual	U:Saw wave, L:5th Saw wave	/Arpeggio
27	Split	U:FM Lead, L:JP Bass	/Arpeggio
28	Dual	U:P5 Poly, L:JP8 Pulse	/Arpeggio
29	Dual	U:TB303 Bs1	/Arpeggio
30	Single	1:Shamisen	/Arpeggio
31	X-Dual	U:Cello, L:Trombone	
32	Split	U:Impact Hit, L:DANCE (Drum Set)	/Arpeggio
33	House style tone setting		
34	Techno style tone setting		
35	Dance style tone setting		
36	Acid Jazz style tone setting		
37	Electoric Pop style tone setting		
38	Pop style tone setting		
39	Ballad style tone setting		
40	Hip Hop style tone setting		
41	Funk Rock style tone setting		
42	Fusion style tone setting		
43	Heavy Metal style tone setting		
44	Hard Rock style tone setting		
45	Latin style tone setting		
46	New Age style tone setting		
47	Orchestra style tone setting (1)		
48	Orchestra style tone setting (2)		
49	Chamber music style tone setting		
50	Baroque style tone setting		
51	Africa style tone setting		
52	World Music style tone setting		
53	Asian style tone setting		
54	Blues style tone setting		
55	Country style tone setting		
56	Folk style tone setting		
57	Reggae style tone setting		
58	Big Band style tone setting		
59	sound set for mainly acoustic jazz		
60	New Orleans Jazz style tone setting		
61	sound set for demo song "POWER"		
62	sound set for demo song "MANGOLAY"		
63	sound set for demo song "KAI STRUTS HIS STUFF"		
64	sound set for demo song "KALEIDOSCOPE"		

1–16, U, L : Part

* Performances no. 33–60 are sound sets appropriate for various genres of music.

User Performance

No.	Contents		
1	Single	1:SA E.Piano 2	
2	Dual	U:Thick Matrix, L: Warm Pad	
3	Split	U:Rattle Pad, L:CS Bass	/Arpeggio
4	Dual	U:Square, L:Saw	/Arpeggio
5	Dual	U:Rock Rhythm, L:Analog Clav.	/Arpeggio
6	Dual	U: CS Bass, L: Saw	/Arpeggio
7	Dual	U: Analog Clav., L: Saw	/Arpeggio
8	Split	U:Flute 2, L:Harp	/Arpeggio
9	X-Dual	U:Echo Drops, L:Soundtrack	
10	Dual	U:SA E.Piano 1, L:SA E.Piano 2	
11	Dual	U:SA E.Piano 1, L:Syn.Strings1	
12	Single	1:Mellow Rhodes	
13	X-Dual	U:Detuned EP 2, L:SA E.Piano 1	
14	Single	1:Reso Clav.	/Arpeggio
15	Single	1:FM Slap	/Arpeggio
16	Split	U:DistOrg. VSw, L:Organ 2	
17	Dual	U:Augklun, L:African Wood	
18	Dual	U:African Wood, L:XP Heaven	
19	For 1:Nylon-str.Gt, 14:Steel-strGt2, and 15:12-str.Gt2, the receive channel is 1.		
20	For 1:Dist. Gt.2, 2:Fingered Bs3, 3:Rock Rhythm, and 4:Power Guitar, the receive channel is 1.		
21	X-Dual	U:Rock Rhythm, L:Feedback Gt2	
22	Dual	U:XP Heaven, L:Clean Gt.2	
23	Single	1:Chorus Gt.2	/Arpeggio
24	X-Dual	U:Banjo, L:Clean Gt.2	
25	Split	U:Sweep pad 2, L:TB303 Bs 1	/Arpeggio
26	Dual	U:Reso Saw, L:Synth Bass 3	/Arpeggio
27	For 1:Pulsey Key, 14:Pulsey Key, and 15:OB Stab, the receive channel is 1.		
28	Dual	U:XP Heaven, L:Fantasia	
29	Dual	U:Thunder Bell, L:Silky Pad	
30	X-Dual	U:Clav., L:SH101 Bs 3	
31	X-Dual	U:P5 Saw Lead, L:P5 Saw Lead	
32	X-Dual	U:Saw Wave, L:Saw Wave	
33	Split	U:Octave Pad, L:SH101 Bs 3	
34	Dual	U:Punch, L:Screaming	/Arpeggio
35	Dual	U:JP8 Square, L:Saw Wave	/Arpeggio
36	Single	1:Rhythmic saw	/Arpeggio
37	Dual	U:TB303 Bs 2, L:Synth Bass 1	/Arpeggio
38	Split	U:Anklung Pad, L:SynthBass101	
39	X-Dual	U:Charang, L:5th Saw Wave	
40	Dual	U:OB Brass, L:OB Stab	
41	Dual	U:Brass 2, L:Tp & Sax	
42	Dual	U:BreathyTenor, L:Alto sax	
43	For 1:Soprano Sax2, 13:Piccolo, 14:Shakuhachi, and 15:Flute, the receive channel is 1.		
44	For 1:BreathyTenor, 12:BreathyTenor, 13:BreathyTenor, 14:Baritone Sax, and 15:Alto Sax, the receive channel is 1. For 5:Brass 1, 6:Trumpet 2, 7:Trombone, and 8:French Horn, the receive channel is 5.		
45	Split	U:Soprano sax2, L:Acoustic Bs.	
46	Dual	U:Flute 2, L:Slow Strings	
47	X-Dual	U:BreathyTenor, L:Soprano Sax2	
48	For 1:Fourth Pets, 14:Fourth Pets, and 15:Strings, the receive channel is 1.		
49	Dual	U:Choir Aahs 2, L:OB Strings	
50	Dual	U:Syn.Strings3, L:Choir Aahs	
51	For 1:D50 Organ, 14:Church Org.1, and 15:Choir Aars, the receive channel is 1.		
52	Single	1:OB String	
53	For 1:Strings, 2:Oboe, 3:Clarinet, 4:Bassoon, 5:French Horn, 7:Trombone, 8:Timoani, 9:Flute, 11:Strings, 12:Strings, 13:Strings, and 14:Strings, the receive channel is 1.		
54	Split	U:bandoneon, L:Accordion It	/Arpeggio
55	Dual	U:Sitar 2, L:Clean Gt.2	
56	Split	U:Shakuhachi, L:Taiko	/Arpeggio
57	Split	U:Shakuhachi, L:Koto	/Arpeggio
58	Single	1:Sitar 2	/Arpeggio
59	Dual	U:LFO RAVE, L:Starship	
60	Dual	U:RAVE Vox, L:Thnder Bell	
61	Single	1:Car-Pass	/Arpeggio
62	Single	1:SFX (Drum Set)	/Arpeggio
63	Single	1:Tape Stop	/Arpeggio
64	Dual	U:KeyOFF Hit, L:Applause	

1–16, U, L : Part

* In the case of Performances which use the same receive channel for two or more Parts, two or more Parts will sound simultaneously when a note message is received on that channel.

Tone list

TONE GROUP 1 Piano

PC#	CC0#	VA	Tone Name	V
1	0		Piano 1	1
	8	1	Piano 1w	2
	16	2	Piano 1d	1
2	0		Piano 2	1
	8	1	Piano 2w	2
3	0		Piano 3	1
	8	1	Piano 3w	2
4	0		Honky-tonk	2
	8	1	Honky-tonk w	2
5	0		E.Piano 1	1
	8	1	Detuned EP 1	2
	16	2	E.Piano 1v	2
	24	3	60's E.Piano	1
	66	4	SA E.Piano 1	+ 2
	67	5	SA E.Piano 2	+ 2
	68	6	60's EPiano2	+ 1
	69	7	MellowRhodes	+ 2
6	0		E.Piano 2	1
	8	1	Detuned EP 2	2
	16	2	E.Piano 2v	2
	66	3	FM E.Piano 1	+ 2
	67	4	FM E.Piano 2	+ 2
	68	5	FM E.Piano 3	+ 2
7	0		Harpsichord	1
	8	1	Coupled Hps.	2
	16	2	Harpsi.w	2
	24	3	Harpsi.o	2
8	0		Clav.	1
	66	1	Muted Clav.	+ 1
	67	2	Reso Clav.	+ 1
	68	3	Analog Clv.	+ 2

TONE GROUP 2 Chromatic Percussion

PC#	CC0#	VA	Tone Name	V
9	0		Celesta	1
10	0		Glockenspiel	1
11	0		Music Box	1
12	0		Vibraphone	1
	8	1	Vib.w	2
13	0		Marimba	1
	8	1	Marimba w	2
14	0		Xylophone	1
15	0		Tubular-bell	1
	8	1	Church Bell	1
	9	2	Carillon	1
16	0		Santur	1

PC# : Program number (Tone number)
CC0#: value of Control Change number 0 (Tones of CC0#=0 are Capital Tones)
VA : Variation number
V : number of voices used
+ : XP-10 original Tone
* : a percussion instrument or special effect sound that cannot be used for playing pitches. Play in the region of C 4 (note number 60).

TONE GROUP 3 Organ

PC#	CC0#	VA	Tone Name	V
17	0		Organ 1	1
	8	1	Detuned Or.1	2
	16	2	60's Organ 1	1
	32	3	Organ 4	2
	66	4	Full Organ	+ 1
	67	5	VS Organ	+ 2
18	0		Organ 2	1
	8	1	Detuned Or.2	2
	32	2	Organ 5	2
19	0		Organ 3	2
	66	1	DistOrg.Slow	+ 1
	67	2	DistOrg.Fast +	1
	68	3	DistOrg. VSw	+ 1
	69	4	D50 Organ	+ 2
20	0		Church Org.1	1
	8	1	Church Org.2	2
	16	2	Church Org.3	2
	66	3	Digi Church +	2
21	0		Reed Organ	1
22	0		Accordion Fr	2
	8	1	Accordion It	2
23	0		Harmonica	1
24	0		Bandoneon	2

TONE GROUP 4 Guitar

PC#	CC0#	VA	Tone Name	V
25	0		Nylon-str.Gt	1
	8	1	Ukulele	1
	16	2	Nylon Gt.o	2
	32	3	Nylon Gt.2	1
	66	4	Nylon Gt.3	+ 1
26	0		Steel-str.Gt	1
	8	1	12-str.Gt	2
	16	2	Mandolin	1
	66	3	Steel-strGt2	+ 1
	67	4	12-str.Gt2	+ 2
	68	5	Nylon+Steel	+ 2
27	0		Jazz Gt.	1
	8	1	Hawaiian Gt.	1
28	0		Clean Gt.	1
	8	1	Chorus Gt.	2
	66	2	Clean Gt.2	+ 1
	67	3	Chorus Gt.2	+ 2
29	0		Muted Gt.	1
	8	1	Funk Gt.	1
	16	2	Funk Gt.2	1
30	0		Overdrive Gt	1
	66	1	5th Overdrv	+ 2
	67	2	5th Overdrv2	+ 2
31	0		DistortionGt	1
	8	1	Feedback Gt.	2
	66	2	Dist. Gt.2	+ 1
	67	3	Feedback Gt2	+ 2
	68	4	5th Dist.	+ 2
	69	5	Power Guitar	+ 2
	70	6	Muted Dis.Gt	+ 1
	71	7	Rock Rhythm	+ 2
32	0		Gt.Harmonics	1
	8	1	Gt.Feedback	1

TONE GROUP 5 Bass

PC#	CC0#	VA	Tone Name	V
33	0		Acoustic Bs.	1
34	0		Fingered Bs.	1
	66	1	Fingered Bs2 +	1
	67	2	Fingered Bs3 +	2
35	0		Picked Bs.	1
	66	1	Picked Bass2 +	1
	67	2	Muted PickBs	+ 1
36	0		Fretless Bs.	1
37	0		Slap Bass 1	1
38	0		Slap Bass 2	1
	66	1	FM Slap	+ 2
39	0		Synth Bass 1	1
	1	1	Synth Bass101	1
	8	2	Synth Bass 3	1
	66	3	SH101 Bs 1	+ 1
	67	4	SH101 Bs 2	+ 1
	68	5	SH101 Bs 3	+ 1
	69	6	TB303 Bs 1	+ 1
	70	7	TB303 Bs 2	+ 1
	71	8	TB303 Bs 3	+ 1
	72	9	FM Super Bs	+ 1
	73	10	P5 Bass	+ 1
	74	11	Sine Bass	+ 1
40	0		Synth Bass 2	2
	8	1	Synth Bass 4	2
	16	2	Rubber Bass	2
	66	3	JP Bass	+ 2
	67	4	CS Bass	+ 2

TONE GROUP 6 Strings/Orchestra

PC#	CC0#	VA	Tone Name	V
41	0		Violin	1
	8	1	Slow Violin	1
42	0		Viola	1
43	0		Cello	1
44	0		Contrabass	1
45	0		Tremolo Str	1
46	0		PizzicatoStr	1
47	0		Harp	1
48	0		Timpani	1

TONE GROUP 7 Ensemble

PC#	CC0#	VA	Tone Name	V
49	0		Strings	1
	8	1	Orchestra	2
50	0		Slow Strings	1
51	0		Syn.Strings1	1
	8	1	Syn.Strings3	2
	66	2	Syn.Strings4	+ 2
	67	3	OB Strings	+ 2
52	0		Syn.Strings2	2
	66	1	Syn.Strings5	+ 2
	67	2	Tron Strings	+ 2
53	0		Choir Aahs	1
	32	1	Choir Aahs 2	1
54	0		Voice Oohs	1
55	0		SynVox	1
56	0		OrchestraHit	2
	66	1	Orch. Hit 2	+ 2
	67	2	Impact Hit	+ 1
	68	3	Double Hit	+ 2
	69	4	KeyOFF Hit	+*2

TONE GROUP 8 Brass

PC#	CC0#	VA	Tone Name	V
57	0		Trumpet	1
	66	1	Trumpet 2	+ 1
	67	2	Twin Trumpet	+ 2
	68	3	Fourth Pets	+ 2
58	0		Trombone	1
	1	1	Trombone 2	2
59	0		Tuba	1
60	0		MutedTrumpet	1
61	0		French Horn	2
	1	1	Fr.Horn 2	2
62	0		Brass 1	1
	8	1	Brass 2	2
	66	2	Tp & Sax	+ 2
63	0		Synth Brass1	2
	8	1	Synth Brass3	2
	16	2	AnalogBrass1	2
	66	3	P5 Brass	+ 2
	67	4	OB Brass	+ 2
64	0		Synth Brass2	2
	8	1	Synth Brass4	1
	16	2	AnalogBrass2	2
	66	3	Spid Brass	+ 1
	67	4	Soft Brass	+ 1

TONE GROUP 9 Reed

PC#	CC0#	VA	Tone Name	V
65	0		Soprano Sax	1
	66	1	Soprano Sax2	+ 1
66	0		Alto Sax	1
67	0		Tenor Sax	1
	66	1	BreathyTenor	+ 1
68	0		Baritone Sax	1
69	0		Oboe	1
70	0		English Horn	1
71	0		Bassoon	1
72	0		Clarinet	1

TONE GROUP 10 Pipe

PC#	CC0#	VA	Tone Name	V
73	0		Piccolo	1
74	0		Flute	1
	66	1	Flute 2	+ 1
	67	2	Tron Flute	+ 1
75	0		Recorder	1
76	0		Pan Flute	1
	66	1	Pan Flute 2	+ 2
77	0		Bottle Blow	2
78	0		Shakuhachi	2
79	0		Whistle	1
80	0		Ocarina	1

PC# : Program number (Tone number)
CC0#: value of Control Change number 0 (Tones of CC0#=0 are Capital Tones)
VA : Variation number
V : number of voices used
\+ : XP-10 original Tone
* : a percussion instrument or special effect sound that cannot be used for playing pitches. Play in the region of C 4 (note number 60).

TONE GROUP 11 Synth Lead

PC#	CC0#	VA	Tone Name	V
81	0		Square Wave	2
	1	1	Square	1
	8	2	Sine Wave	1
	66	3	JP8 Square	+ 1
	67	4	OB Lead	+ 2
	68	5	JP8 Pulse	+ 2
	69	6	FM Lead	+ 1
	70	7	FM Lead 2	+ 2
82	0		Saw Wave	2
	1	1	Saw	1
	8	2	Doctor Solo	2
	66	3	P5 Poly	+ 2
	67	4	GR300 Lead	+ 1
	68	5	P5 Saw Lead	+ 1
	69	6	Mg Lead	+ 1
	70	7	Reso Saw	+ 1
	71	8	Cheese Saw	+ 1
	72	9	Cheese Saw 2	+ 2
	73	10	Rhythmic Saw	+ 2
	74	11	LFO Saw	+ 2
83	0		Syn.Calliope	2
84	0		Chiffer Lead	2
85	0		Charang	2
86	0		Solo Vox	2
	66	1	RAVE Vox	+ 2
87	0		5th Saw Wave	2
	66	1	5th Lead	+ 2
	67	2	5th Ana.Clav +	2
88	0		Bass & Lead	2

TONE GROUP 12 Synth Pad etc.

PC#	CC0#	VA	Tone Name	V
89	0		Fantasia	2
	66	1	XP Heaven	+ 2
90	0		Warm Pad	1
	66	1	Soft Pad	+ 2
	67	2	Thick Matrix	+ 1
	68	3	Octave Pad	+ 2
	69	4	Random Pad	+ 2
91	0		Polysynth	2
	66	1	OB Stab	+ 1
92	0		Space Voice	1
	66	1	LFO Vox	+ 2
93	0		Bowed Glass	2
	66	1	SoftBellPad	+ 2
	67	2	JP8 Sqr Pad	+ 2
94	0		Metal Pad	2
95	0		Halo Pad	2
96	0		Sweep Pad	1
	66	1	Sweep Pad 2	+ 2

TONE GROUP 13 Synth SFX

PC#	CC0#	VA	Tone Name	V
97	0		Ice Rain	2
	66	1	Angklung	+ 1
	67	2	Rattle Pad	+ 2
	68	3	African Wood	+ 2
98	0		Soundtrack	2
	66	1	XP Prologue	+ 2
	67	2	SoftBellPd2	+ 2
99	0		Crystal	2
	1	1	Syn Mallet	1
100	0		Atmosphere	2
	66	1	Pulsey Key	+ 2
	67	2	Sine Rhodes	+ 1
101	0		Brightness	2
102	0		Goblin	2
	66	1	Anklung Pad	+ 2
	67	2	LFO Pad	+ 2
	68	3	Thunder Bell	+ 2
	69	4	Falling Down	+ 2
	70	5	LFO RAVE	+ 2
103	0		Echo Drops	1
	1	1	Echo Bell	2
	2	2	Echo Pan	2
	66	3	Pan Sequence	+ 2
104	0		Star Theme	2
	66	1	Dream Pad	+ 2
	67	2	Silky Pad	+ 2

TONE GROUP 14 Ethnic

PC#	CC0#	VA	Tone Name	V
105	0		Sitar	1
	1	1	Sitar 2	2
106	0		Banjo	1
107	0		Shamisen	1
108	0		Koto	1
	8	1	Taisho Koto	2
109	0		Kalimba	1
110	0		Bagpipe	1
111	0		Fiddle	1
112	0		Shanai	1

TONE GROUP 15 Percussive

PC#	CC0#	VA	Tone Name	V
113	0		Tinkle Bell	1
114	0		Agogo	1
115	0		Steel Drums	1
116	0		Woodblock	* 1
	8	1	Castanets	* 1
117	0		Taiko	* 1
	8	1	Concert BD	* 1
118	0		Melo. Tom 1	* 1
	8	1	Melo. Tom 2	* 1
119	0		Synth Drum	* 1
	8	1	808 Tom	* 1
	16	2	Elec Perc.	* 1
120	0		Reverse Cym.	* 1

TONE GROUP 16 SFX

PC#	CC0#	VA	Tone Name			V
121	0		Gt.FretNoise		*	1
	1	1	Gt.Cut Noise		*	1
	2	2	String Slap		*	1
122	0		Breath Noise			1
	1	1	Fl.Key Click		*	1
123	0		Seashore		*	1
	1	1	Rain		*	1
	2	2	Thunder		*	1
	3	3	Wind		*	1
	4	4	Stream		*	2
	5	5	Bubble		*	2
124	0		Bird		*	2
	1	1	Dog		*	1
	2	2	Horse-Gallop		*	1
	3	3	Bird 2		*	1
125	0		Telephone 1		*	1
	1	1	Telephone 2		*	1
	2	2	DoorCreaking		*	1
	3	3	Door		*	1
	4	4	Scratch		*	1
	5	5	Wind Chimes		*	2
	66	6	Tape Stop	+	*	2
126	0		Helicopter		*	1
	1	1	Car-Engine		*	1
	2	2	Car-Stop		*	1
	3	3	Car-Pass		*	1
	4	4	Car-Crash		*	2
	5	5	Siren		*	1
	6	6	Train		*	1
	7	7	Jetplane		*	2
	8	8	Starship		*	2
	9	9	Burst Noise		*	2
	66	10	Calculating	+	*	2
127	0		Applause		*	2
	1	1	Laughing		*	1
	2	2	Screaming		*	1
	3	3	Punch		*	1
	4	4	Heart Beat		*	1
	5	5	Footsteps		*	1
128	0		Gun Shot		*	1
	1	1	Machine Gun		*	1
	2	2	Lasergun		*	1
	3	3	Explosion		*	2

PC# : Program number (Tone number)
CC0#: value of Control Change number 0 (Tones of CC0#=0 are Capital Tones)
VA : Variation number
V : number of voices used
+ : XP-10 original Tone
* : a percussion instrument or special effect sound that cannot be used for playing pitches. Play in the region of C 4 (note number 60).

Drum Set list

	Note No.	PC#1(1):STANDARD PC#33(6):JAZZ		PC#9:(2)ROOM	PC#17(3):POWER	PC#25(4):ELECTRONIC
	10	—		—	—	—
	11	—		—	—	—
C0	12	—		—	—	—
	13	—		—	—	—
	14	—		—	—	—
	15	—		—	—	—
	16	—		—	—	—
	17	—		—	—	—
	18	—		—	—	—
	19	—		—	—	—
	20	—		—	—	—
	21	—		—	—	—
	22	—		—	—	—
	23	—		—	—	—
C1	24	—		—	—	—
	25	—		—	—	—
	26	—		—	—	—
	27	High Q				
	28	Slap				
	29	Scratch Push	[EXC 7]			
	30	Scratch Pull	[EXC 7]			
	31	Sticks				
	32	Square Click				
	33	Metronome Click				
	34	Metronome Bell				
	35	Kick Drum 2/JAZZ BD 2				
C2	36	Kick Drum 1/JAZZ BD 1			MONDO Kick	Elec BD
	37	Side Stick				
	38	Snare Drum 1			Gated SD	Elec SD
	39	Hand Clap				
	40	Snare Drum 2				Gated SD
	41	Low Tom 2		Room Low Tom 2	Room Low Tom 2	Elec Low Tom 2
	42	Closed Hi-Hat	[EXC 1]			
	43	Low Tom 1		Room Low Tom 1	Room Low Tom 1	Elec Low Tom 1
	44	Pedal Hi-Hat	[EXC 1]			
	45	Mid Tom 2		Room Mid Tom 2	Room Mid Tom2	Elec Mid Tom 2
	46	Open Hi-Hat	[EXC 1]			
	47	Mid Tom 1		Room Mid Tom 1	Room Mid Tom 1	Elec Mid Tom 1
C3	48	High Tom 2		Room Hi Tom 2	Room Hi Tom 2	Elec Hi Tom 2
	49	Crash Cymbal 1				
	50	High Tom 1		Room Hi Tom 1	Room Hi Tom 1	Elec Hi Tom 1
	51	Ride Cymbal 1				
	52	Chinese Cymbal				Reverse Cymbal
	53	Ride Bell				
	54	Tambourine				
	55	Splash Cymbal				
	56	Cowbell				
	57	Crash Cymbal 2				
	58	Vibra-slap				
	59	Ride Cymbal 2				
C4	60	High Bongo				
	61	Low Bongo				
	62	Mute High Conga				
	63	Open High Conga				
	64	Low Conga				
	65	High Timbale				
	66	Low Timbale				
	67	High Agogo				
	68	Low Agogo				
	69	Cabasa				
	70	Maracas				
	71	Short Hi Whistle	[EXC 2]			
C5	72	Long Low Whistle	[EXC 2]			
	73	Short Guiro	[EXC 3]			
	74	Long Guiro	[EXC 3]			
	75	Claves				
	76	High Wood Block				
	77	Low Wood Block				
	78	Mute Cuica	[EXC 4]			
	79	Open Cuica	[EXC 4]			
	80	Mute Triangle	[EXC 5]			
	81	Open Triangle	[EXC 5]			
	82	Shaker				
	83	Jingle Bell				
C6	84	Bell Tree				
	85	Castanets				
	86	Mute Surdo	[EXC 6]			
	87	Open Surdo	[EXC 6]			
	88	—		—	—	—
	89	—		—	—	—
	90	—		—	—	—
	91	—		—	—	—
	92	—		—	—	—
	93	—		—	—	—
	94	—		—	—	—
	95	—		—	—	—
C7	96	—		—	—	—
	97	—		—	—	—
	98	—		—	—	—
	99	—		—	—	—
	100	—		—	—	—
	101	—		—	—	—
	102	—		—	—	—
	103	—		—	—	—
	104	—		—	—	—
	105	—		—	—	—
	106	—		—	—	—

PC# : Program number
( ) : Drum Set number
** : percussion instrument using 2 voices (all other percussion instruments use 1 voice)
blank : identical to percussion instrument sound of STANDARD
- : no sound
[EXC] : will not sound simultaneously with percussion instrument sounds of the same number

	Note No.	PC#26(5):TR-808		PC#41(7):BRUSH	PC#49(8):ORCHESTRA		PC#57(9):SFX	
		—		—	—		—	
	10	—		—	—		—	
	11	—		—	—		—	
C0	12	—		—	—		—	
	13	—		—	—		—	
	14	—		—	—		—	
	15	—		—	—		—	
	16	—		—	—		—	
	17	—		—	—		—	
	18	—		—	—		—	
	19	—		—	—		—	
	20	—		—	—		—	
	21	—		—	—		—	
	22	—		—	—		—	
	23	—		—	—		—	
C1	24	—		—	—		—	
	25	—		—	—		—	
	26				Closed Hi-Hat	[EXC 1]	—	
	27				Pedal Hi-Hat	[EXC 1]	—	
	28				Open Hi-Hat	[EXC 1]	—	
	29				Ride Cymbal		—	
	30						—	
	31						—	
	32						—	
	33						—	
	34			Jazz BD2	Concert BD 2		—	
	35	808 Bass Drum		Jazz BD1	Concert BD 1		—	
C2	36	808 Rim Shot					—	
	37	808 Snare Drum		Brush Tap	Concert SD		—	
	38			Brush Slap	Castanets		High Q	
	39			Brush Swirl	Concert SD		Slap	
	40	808 Low Tom2			Timpani F		Scratch Push	[EXC 7]
	41	808 CHH	[EXC 1]		Timpani F#		Scratch Pull	[EXC 7]
	42	808 Low Tom1			Timpani G		Sticks	
	43	808 CHH	[EXC 1]		Timpani G#		Square Click	
	44	808 Mid Tom2			Timpani A		Metronome Click	
	45	808 OHH	[EXC 1]		Timpani A#		Metronome Bell	
	46	808 Mid Tom1			Timpani B		Guitar Sliding Finger	
	47	808 Hi Tom2			Timpani c		Guitar Cutting Noise(down)	
C3	48	808 Cymbal			Timpani c#		Guitar Cutting Noise(up)	
	49	808 Hi Tom1			Timpani d		String Slap of Double Bass	
	50				Timpani d#		Fl.Key Click	
	51				Timpani e		Laughing	
	52				Timpani f		Screaming	
	53						Punch	
	54						Heart Beat	
	55	808 Cowbell					Footsteps 1	
	56				Concert Cymbal 2		Footsteps 2	
	57						Applause	**
	58				Concert Cymbal 1		Door Creaking	
	59						Door	
C4	60						Scratch	
	61	808 High Conga					Wind Chimes	**
	62	808 Mid Conga					Car-Engine	
	63	808 Low Conga					Car-Stop	
	64						Car-Pass	
	65						Car-Crash	**
	66						Siren	
	67						Train	
	68						Jetplane	**
	69	808 Maracas					Helicopter	
	70						Starship	**
	71						Gun Shot	
C5	72						Machine Gun	
	73						Lasergun	
	74	808 Claves					Explosion	**
	75						Dog	
	76						Horse-Gallop	
	77						Birds	**
	78						Rain	
	79						Thunder	
	80						Wind	
	81						Seashore	
	82						Stream	**
	83						Bubble	**
C6	84						—	
	85						—	
	86						—	
	87	—		—	Applause **		—	
	88	—		—	—		—	
	89	—		—	—		—	
	90	—		—	—		—	
	91	—		—	—		—	
	92	—		—	—		—	
	93	—		—	—		—	
	94	—		—	—		—	
	95	—		—	—		—	
C7	96	—		—	—		—	
	97	—		—	—		—	
	98	—		—	—		—	
	99	—		—	—		—	
	100	—		—	—		—	
	101	—		—	—		—	
	102	—		—	—		—	
	103	—		—	—		—	
	104	—		—	—		—	
	105	—		—	—		—	
	106							

PC# : Program number
( ) : Drum Set number
** : percussion instrument using 2 voices (all other percussion instruments use 1 voice)
blank : identical to percussion instrument sound of STANDARD (p.74)
- : no sound
[EXC]: will not sound simultaneously with percussion instrument sounds of the same number

	Note No.	PC#67(10):STANDARD 2 +		PC#68(11):STANDARD 3 +		PC#69(12):ROOM 2 +	PC#70(13):ROCK +
	10	Kick Drum 1					
	11	Kick Drum 2					
C0	12	Standard Kick 1					
	13	Standard Kick 2					
	14	MONDO Kick					
	15	Room Kick					
	16	Punch Kick					
	17	Elec BD					
	18	Round Kick 1					
	19	Round Kick 2					
	20	808 Bass Drum					
	21	TR-808 Kick					
	22	TR-909 Kick					
	23	Techno Kick					
C1	24	Concert BD 1					
	25	Concert BD 2					
	26	Snare Roll					
	27	High Q					
	28	Slap					
	29	Scratch Push	[EXC7]				
	30	Scratch Pull	[EXC7]				
	31	Sticks					
	32	Square Click					
	33	Metronome Click					
	34	Metronome Bell					
	35	Room Kick		Punch Kick		Standard Kick 1	Room Kick
C2	36	Standard Kick 1		Standard Kick 2		Room Kick	Punch Kick
	37	Side Stick					
	38	Standard Snare 1		Standard Snare 2		Room Snare	Rock Snare
	39	Hand Clap					
	40	Piccolo Snare 2		Snare Drum 1		90's Snare	Room Snare
	41	Low Tom 2				Room Low Tom 2	Room Low Tom 2
	42	Closed Hi-hat 2	[EXC1]	Closed Hi-hat 3	[EXC1]		
	43	Low Tom 1				Room Low Tom 1	Room Low Tom 1
	44	Pedal Hi-hat 2	[EXC1]	Pedal Hi-hat 3	[EXC1]		
	45	Mid Tom 2				Room Mid Tom 2	Room Mid Tom 2
	46	Open Hi-hat 2	[EXC1]	Open Hi-hat 3	[EXC1]		
	47	Mid Tom 1				Room Mid Tom 1	Room Mid Tom 1
C3	48	High Tom 2				Room Hi Tom 2	Room Hi Tom 2
	49	Crash Cymbal 1					
	50	High Tom 1				Room Hi Tom 1	Room Hi Tom 1
	51	Ride Cymbal 1					
	52	Chinese Cymbal					
	53	Ride Bell					
	54	Tambourine					
	55	Splash Cymbal					
	56	Cowbell					
	57	Crash Cymbal 2					
	58	Vibra-slap					
	59	Ride Cymbal 2					
C4	60	High Bongo					
	61	Low Bongo					
	62	Mute High Conga					
	63	Open High Conga					
	64	Low Conga					
	65	High Timbale					
	66	Low Timbale					
	67	High Agogo					
	68	Low Agogo					
	69	Cabasa					
	70	Maracas					
	71	Short Hi Whistle	[EXC2]				
C5	72	Long Low Whistle	[EXC2]				
	73	Short Guiro	[EXC3]				
	74	Long Guiro	[EXC3]				
	75	Claves					
	76	High Wood Block					
	77	Low Wood Block					
	78	Mute Cuica	[EXC4]				
	79	Open Cuica	[EXC4]				
	80	Mute Triangle	[EXC5]				
	81	Open Triangle	[EXC5]				
	82	Shaker					
	83	Jingle Bell					
C6	84	Bell Tree					
	85	Castanets					
	86	Mute Surdo					
	87	Open Surdo					
	88	Snare Drum 1					
	89	Snare Drum 2					
	90	Standard Snare 1					
	91	Standard Snare 2					
	92	Room Snare					
	93	Gated SD					
	94	Rock Snare					
	95	Elec SD					
C7	96	Piccolo Snare					
	97	Piccolo Snare 2					
	98	90's Snare					
	99	Techno Snare	**				
	100	808 Snare Drum					
	101	808 Snare Drum2					
	102	TR-909 Snare					
	103	Concert SD					
	104	Loud Snare					
	105	Brush Tap					
	106	Brush Swirl					

PC# : Program number
( ) : Drum Set number
+ : XP-10 original Drum Set
** : percussion instrument using 2 voices (all other percussion instruments use 1 voice)
blank : identical to percussion instrument sound of STANDARD 2
- : no sound
[EXC] : will not sound simultaneously with percussion instrument sounds of the same number

	Note No.	PC#71(14):TR-909 +		PC#72(15):DANCE +		PC#73(16):TECHNO +	
	10						
	11						
C0	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
C1	24						
	25						
	26						
	27						
	28						
	29						
	30						
	31						
	32						
	33						
	34						
	35	TR-808 Kick		Techno Kick		Techno Kick	
C2	36	TR-909 Kick		Round Kick 1		Round Kick 2	
	37	808 Rim Shot		808 Rim Shot		808 Rim Shot	
	38	TR-909 Snare		90's Snare		Techno Snare	**
	39						
	40	808 Snare Drum 2		Piccolo Snare 1		Loud Snare	
	41	808 Low Tom 4		Elec Low Tom 2		Elec Low Tom 2	
	42	808 CHH 2	[EXC1]	CR-78 CHH	[EXC1]	Techno CHH	[EXC1]
	43	808 Low Tom 3		Elec Low Tom 1		Elec Low Tom 1	
	44	808 CHH 2	[EXC1]	808 CHH 2 [EXC1]	808 CHH 2	[EXC1]	
	45	808 Mid Tom 4		Elec Mid Tom 2		Elec Mid Tom 2	
	46	808 OHH	[EXC1]	CR-78 OHH	[EXC1]	CR-78 OHH	[EXC1]
	47	808 Mid Tom 3		Elec Mid Tom 1		Elec Mid Tom 1	
C3	48	808 Hi Tom 4		Elec Hi Tom 2		Elec Hi Tom 2	
	49	808 Cymbal		808 Cymbal		808 Cymbal	
	50	808 Hi Tom 3		Elec Hi Tom 1		Elec Hi Tom 1	
	51						
	52			Reverse Cymbal		Reverse Cymbal	
	53						
	54						
	55						
	56	808 Cowbell		808 Cowbell		808 Cowbell	
	57						
	58						
	59						
C4	60						
	61						
	62	808 High Conga		808 High Conga		808 High Conga	
	63	808 Mid Conga		808 Mid Conga		808 Mid Conga	
	64	808 Low Conga		808 Low Conga		808 Low Conga	
	65						
	66						
	67						
	68						
	69						
	70	808 Maracas		808 Maracas		808 Maracas	
	71						
C5	72						
	73						
	74						
	75	808 Claves		808 Claves	808 Claves		
	76						
	77						
	78						
	79						
	80						
	81						
	82						
	83						
C6	84						
	85						
	86						
	87						
	88						
	89						
	90						
	91						
	92						
	93						
	94						
	95						
C7	96						
	97						
	98						
	99						
	100						
	101						
	102						
	103						
	104						
	105						
	106						

PC# : Program number
( ) : Drum Set number
+ : XP-10 original Drum Set
** : percussion instrument using 2 voices (all other percussion instruments use 1 voice)
blank : identical to percussion instrument sound of STANDARD 2 (p.76)
- : no sound
[EXC] : will not sound simultaneously with percussion instrument sounds of the same number

Arpeggio Style list

Style	Motif	Brat Ptrn	Shuffle Rate	Groove Rate
1/4	<all> (SNGL UP&DW)	(1/4)	50–90 (50)	0–100 (20)
1/6	<all> (SNGL UP&DW)	(1/6)	50–90 (50)	0–100 (20)
1/8	<all> (SNGL UP&DW)	(1/8)	50–90 (50)	0–100 (20)
1/12	<all> (SNGL UP&DW)	(1/12)	50–90 (50)	0–100 (20)
1/16	<all> (SNGL UP&DW)	1/16 1–3 (1/16 2)	50–90 (50)	0–100 (20)
1/32	SINGLE, DUAL, NOTE ORDER, GLISSANDO, BASS+UP1–8, BASS+RND1–3, TOP+UP1–6 (SNGL UP&DW)	1/32 1–3 (1/32 3)	50–90 (50)	0–100 (20)
GLISSANDO	(GLISSANDO)	1/16 1–3, 1/32 1–3 (1/32 1)	50–90 (50)	0–100 (0)
SEQUENCE A	<all> (SNGL UP&DW)	SEQ-A1–6 (SEQ-A1)	50–90 (50)	0–100 (100)
SEQUENCE B	<all> (SNGL UP&DW)	SEQ-B1–4 (SEQ-B1)	50–90 (50)	0–100 (100)
SEQUENCE C	SINGLE, DUAL, NOTE ORDER, GLISSANDO, BASS+UP1–8, BASS+RND1–3, TOP+UP1–6 (SNGL UP&DW)	SEQ-C1–2 (SEQ-C1)	50–90 (50)	0–100 (100)
ECHO	SINGLE, DUAL, NOTE ORDER (SINGLE UP)	ECHO1–3 (ECHO1)	50–90 (50)	0–100 (100)
WALTZ	BAS+CHORD2, BASS+UP2, BASS+RND2, TOP+UP2 (BAS+CHORD2)	1/6, 1/12 (1/6)	50–90 (50)	0–100 (20)
SWING WALZ	BAS+CHORD2, BASS+UP2, BASS+RND2, TOP+UP2 (BAS+CHORD2)	1/16 1–3 (1/16 2)	50–90 (66)	0–100 (20)
SYN BASS	(BASS+UP2)	SEQ-A1, C1 (SEQ-A1)	50–90 (50)	0–100 (100)
HEAVY SLAP	BASS+UP5, TOP+UP5 (BASS+UP5)	MUTE02–03 (MUTE02)	50–90 (50)	0–100 (100)
LIGHT SLAP	BASS+UP5, TOP+UP5 (TOP+UP5)	MUTE02–03 (MUTE03)	50–90 (50)	0–100 (100)
WALK BASS	SINGLE, NOTE ORDER, GLISSANDO (SNGL UP&DW)	WALKBS, REF1 (WALKBS)	50–90 (50)	0–100 (100)
SNGL CUT'N	SINGLE, DUAL, NOTE ORDER, BASS+UP1–8, BASS+RND1–3, TOP+UP1–6 (BASS+UP6)	MUTE01, 04 (MUTE04)	50–90 (50)	0–100 (100)
CHRD CUT'N	(CHORD)	MUTE07–12 (MUTE07)	50–90 (50)	0–100 (100)
STRM CUT'N	SINGLE UP, SINGL DOWN (SINGLE UP)	CUT1–2 (CUT1)	50–90 (50)	0–100 (100)
REGGAE	SINGLE UP, SINGL DOWN (SINGLE UP)	(REGGAE)	50–90 (50)	0–100 (100)
PIANO BKNG	(CHORD)	MUTE12, REF2 (MUTE12)	50–90 (50)	0–100 (100)
CLAVI CHRD	BAS+CHORD4–5 (BAS+CHORD4)	MUTE05–06 (MUTE05)	50–90 (50)	0–100 (100)
PERCUSSION	SINGLE, DUAL, NOTE ORDER, BASS+UP1–8, BASS+RND1–3, TOP+UP1–6 (SINGLE UP)	PERC1–4 (PERC1)	50–90 (50)	0–100 (100)
STRUMMING	SINGLE UP, SINGL DOWN (SINGLE UP)	STRUM1–2 (STRUM1)	50–90 (50)	0–100 (100)
HARP	SINGLE UP, SINGL DOWN, SNGL UP&DW, GLISSANDO (SNGL UP&DW)	(HARP)	50–90 (50)	0–100 (100)
SHAMISEN	TOP+UP4–6 (TOP+UP4)	(SEQ-A2)	50–90 (50)	0–100 (100)
BOUND BALL	SINGLE, DUAL, NOTE ORDER, GLISSANDO (SNGL RANDM)	(BOUND)	50–90 (50)	0–100 (100)
RANDOM	SNGL RANDM, DUL RANDOM, BASS+RND1–3 (SNGL RANDM)	1/4, 1/6, 1/12, 1/16 1–3, 1/32 1–3, RANDOM (1/16 2)	50–90 (50)	0–100 (30)
LIMITLESS	<all> (---)	<all> (---)	50–90 (---)	0–100 (---)

SINGLE : SINGLE UP, SINGL DOWN, SNGL UP&DW, SNGL RANDM
DUAL : DUAL UP, DUAL DOWN, DL UP&DW, DUL RANDOM
<all> : there is no restriction on the value which can be set
( ) : Initial settings when each style is selected
(–) : the setting will depend on the Performance

Section 1. Receive data

■ Channel Voice Messages

● Note off

Status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
kk=note number : 00H - 7FH (0 - 127)
vv=note off velocity : 00H - 7FH (0 - 127)

* For Drum Parts, these messages are received when Rx.NOTE OFF = ON for each Instrument.
* The velocity values of Note Off messages are ignored.

● Note on

Status	2nd byte	3rd byte
9nH	kkH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
kk=note number : 00H - 7FH (0 - 127)
vv=note on velocity : 01H - 7FH (1 - 127)

* Not received when Rx.NOTE MESSAGE = OFF. (Initial value is ON)
* For Drum Parts, not received when Rx.NOTE ON = OFF for each Instrument.

● Polyphonic Key Pressure

Status	2nd byte	3rd byte
AnH	kkH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
kk=note number : 00H - 7FH (0 - 127)
vv=key pressure : 00H - 7FH (0 - 127)

* Not received when Rx.POLY PRESSURE (PAf) = OFF. (Initial value is ON)
* The resulting effect is determined by System Exclusive messages. With the initial settings, there will be no effect.

● Control Change

* If the Control Change Number that corresponds to the System Setup Slider1 CC#/Slider2 CC#/Pedal CC# is received on the receive channel of current part , the effect corresponds to the Performance Common settings will occur. However if received GS Reset, the Performance Common settings will become ineffective, and effect of the Control changes will occur. The settings will be receive on the receive channel of current part.
* When Rx.CONTROL CHANGE = OFF, all control change messages except for Channel Mode messages will be ignored.
* The value specified by a Control Change message will not be reset even by a Program Change, etc.

○ Bank Select (Controller number 0,32)

Status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm,ll=Bank number :00H,00H - 7FH,7FH (bank.1 - bank.16384) Initial Value = 00 00H (bank.1)

* Not received when Rx.BANK SELECT = OFF. "Rx.BANK SELECT" is set to OFF by "Turn General MIDI System On", and set to ON by "GS RESET". (Power-on default value is ON.)
* Bank number LSB will be handled as 00H regardless of the received value. However, when sending Bank Select messages, you have to send both the MSB (mmH) and LSB (llH, the value should be 00H) together.
* Bank Select processing will be suspended until a Program Change message is received.

○ Modulation (Controller number 1)

Status	2nd byte	3rd byte
BnH	01H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Modulation depth : 00H - 7FH (0 - 127)

* Not received when Rx.MODULATION = OFF. (Initial value is ON)
* The resulting effect is determined by System Exclusive messages. With the initial settings, this is Pitch Modulation Depth.

○ Portamento Time (Controller number 5)

Status	2nd byte	3rd byte
BnH	05H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Portamento Time : 00H - 7FH (0 - 127) Initial value = 00H (OFF)

* This adjusts the rate of pitch change when Portamento is ON or when using the Portamento Control.When Portamento Time is 0, portamento will be OFF.

○ Data Entry (Controller number 6,38)

Status	2nd byte	3rd byte
BnH	06H	mmH
BnH	26H	llH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm,ll= the value of the parameter specified by RPN/NRPN

○ Volume (Controller number 7)

Status	2nd byte	3rd byte
BnH	07H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Volume : 00H - 7FH (0 - 127) Initial value = 64H (100)

* Volume messages are used to adjust the volume balance of each Part.
* Not received when Rx.VOLUME = OFF. (Initial value is ON)

○ Pan (Controller number 10)

Status	2nd byte	3rd byte
BnH	0AH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=pan : 00H - 40H - 7FH (Left - Center - Right) Initial value = 40H (Center)

* For Rhythm Parts, this is a relative adjustment of each Instrument's pan setting.
* Not received when Rx.PANPOT = OFF. (Initial value is ON)

○ Expression (Controller number 11)

Status	2nd byte	3rd byte
BnH	0BH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Expression : 00H - 7FH (0 - 127) Initial value = 7FH (127)

* It can be used independently from Volume messages. Expression messages are used for musical expression within a performance; e.g., expression pedal movements, crescendo and decrescendo.
* Not received when Rx.EXPRESSION = OFF. (Initial value is ON)

○ Hold 1 (Controller number 64)

Status	2nd byte	3rd byte
BnH	40H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) 0-63=OFF 64-127=ON

* Not received when Rx.HOLD1 = OFF. (Initial value is ON)

○ Portamento (Controller number 65)

Status	2nd byte	3rd byte
BnH	41H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) 0-63=OFF 64-127=ON

* Not received when Rx.PORTAMENTO = OFF. (Initial value is ON)

○ Sostenuto (Controller number 66)

Status	2nd byte	3rd byte
BnH	42H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) 0-63=OFF 64-127=ON

* Not received when Rx.SOSTENUTO = OFF. (Initial value is ON)

○ Soft (Controller number 67)

Status	2nd byte	3rd byte
BnH	43H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) 0-63=OFF 64-127=ON

* Not received when Rx.SOFT = OFF. (Initial value is ON)

● Portamento control (Controller number 84)

Status	2nd byte	3rd byte
BnH	54H	kkH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
kk=source note number : 00H - 7FH (0 - 127)

* A Note-on received immediately after a Portamento Control message will change continuously in pitch, starting from the pitch of the Source Note Number.
* If a voice is already sounding for a note number identical to the Source Note Number, this voice will continue sounding (i.e., legato) and will, when the next Note-on is received, smoothly change to the pitch of that Note-on.
* The rate of the pitch change caused by Portamento Control is determined by the Portamento Time value.

Example 1.

On MIDI	Description	Result
90 3C 40	Note on C4	C4 on
B0 54 3C	Portamento Control from C4	no change (C4 voice still sounding)
90 40 40	Note on E4	glide from C4 to E4
80 3C 40	Note off C4	no change
80 40 40	Note off E4	E4 off

Example 2.

On MIDI	Description	Result
B0 54 3C	Portamento Control from C4	no change
90 40 40	Note on E4	E4 is played with glide from C4 to E4
80 40 40	Note off E4	E4 off

○ Effect 1 (Reverb Send Level) (Controller number 91)

Status	2nd byte	3rd byte
BnH	5BH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) Initial value = 28H (40)

* This message adjusts the Reverb Send Level (Reverb Depth) of each Part.

○ Effect 3 (Chorus Send Level) (Controller number 93)

Status	2nd byte	3rd byte
BnH	5DH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) Initial value = 00H (0)

* This message adjusts the Chorus Send Level (Chorus Depth) of each Part.

○ NRPN MSB/LSB (Controller number 98,99)

Status	2nd byte	3rd byte
BnH	63H	mmH
BnH	62H	llH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm=upper byte of the parameter number specified by NRPN
ll=lower byte of the parameter number specified by NRPN

* NRPN can be received when Rx.NRPN = ON. "Rx.NRPN" is set to OFF by power-on reset or by receiving "Turn General MIDI System On", and it is set to ON by "GS RESET".

NRPN
The NRPN (Non Registered Parameter Number) message allows an extended range of control changes to be used.
To use these messages, you must first use NRPN MSB and NRPN LSB messages to specify the parameter to be controlled, and then use Data Entry messages to specify the value of the specified parameter. Once an NRPN parameter has been specified, all Data Entry messages received on that channel will modify the value of that parameter. To prevent accidents, it is recommended that you set RPN Null (RPN Number = 7FH/7Fh) when you have finished setting the value of the desired parameter. Refer to Section 4. Supplementary material "Examples of actual MIDI messages" <Example 4> (Page 90). On the GS devices, Data entry LSB (llH) of NRPN is ignored, so it is no problem to send Data entry MSB (mmH) only (without Data entry LSB).

On the XP-10, NRPN can be used to modify the following parameters.

NRPN MSB LSB	Data entry MSB	Description
01H 08H	mmH	Vibrato rate (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 09H	mmH	Vibrato depth (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 0AH	mmH	Vibrato delay (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 20H	mmH	TVF cutoff frequency (relative change on specified channel) mm: 0EH - 40H - 50H (-50 - 0 - +16)
01H 21H	mmH	TVF resonance (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 63H	mmH	TVF&TVA Env. Attack time (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 64H	mmH	TVF&TVA Env. Decay time (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 66H	mmH	TVF&TVA Env. Release time (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
18H rrH	mmH	Pitch coarse of drum instrument (relative change on specified drum instrument) rr: key number of drum instrument mm: 28H - 40H - 58H (-24 - 0 - +24 semitone)
1AH rrH	mmH	TVA level of drum instrument (absolute change on specified drum instrument) rr: key number of drum instrument mm: 00H - 7FH (zero - maximum)
1CH rrH	mmH	Panpot of drum instrument (absolute change on specified drum instrument) rr: key number of drum instrument mm: 00H, 01H - 40H - 7FH (Random, Left-Center-Right)
1DH rrH	mmH	Reverb send level of drum instrument (absolute change on specified drum instrument) rr: key number of drum instrument mm: 00H - 7FH (zero - maximum)
1EH rrH	mmH	Chorus send level of drum instrument (absolute change on specified drum instrument) rr: key number of drum instrument mm: 00H - 7FH (zero - maximum)

* Parameters marked "relative change" will change relative to the preset value.
* Parameters marked "absolute change" will be set to the absolute value of the parameter, regardless of the preset value.

○ RPN MSB/LSB (Controller number 100,101)

Status	2nd byte	3rd byte
BnH	65H	mmH
BnH	64H	llH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm=upper byte of parameter number specified by RPN
ll=lower byte of parameter number specified by RPN

* Not received when Rx.RPN = OFF. (Initial value is ON)
* The value specified by RPN will not be reset even by messages such as Program Change or Reset All Controller.

RPN
The RPN (Registered Parameter Number) messages are expanded control changes, and each function of an RPN is described by the MIDI Standard.
To use these messages, you must first use RPN MSB and RPN LSB messages to specify the parameter to be controlled, and then use Data Entry messages to specify the value of the specified parameter. Once an RPN parameter has been specified, all Data Entry messages received on that channel will modify the value of that parameter. To prevent accidents, it is recommended that you set RPN Null (RPN Number = 7FH/7Fh) when you have finished setting the value of the desired parameter.Refer to Section 4. "Examples of actual MIDI messages" <Example 4> (Page 90).

On the XP-10, RPN can be used to modify the following parameters.

RPN MSB LSB	Data entry MSB LSB	Explanation
00H 00H	mmH —	Pitch Bend Sensitivity mm: 00H - 18H (0 - 24 semitones) Initial value = 02H (2 semitones) ll: ignored (processed as 00H) specify up to 2 octaves in semitone steps
00H 01H	mmH llH	Master Fine Tuning mm,ll: 00 00H - 40 00H - 7F 7FH (-100 - 0 - +99.99 cents) Initial value = 40 00H (Â¡0 cent) Refer to 5. Supplementary material, "About tuning"(P-91).
00H 02H	mmH —	Master Coarse Tuning mm: 28H - 40H - 58H (-24 - 0 - +24 semitones) Initial value = 40H (Â¡0 semitone) ll: ignored (processed as 00H)
7FH 7FH	— —	RPN null Set condition where RPN and NRPN are unspecified. The data entry messages after set RPN null will be ignored. (No Data entry messages are required after RPN null). Settings already made will not change. mm,ll: ignored

○ Ext Control Number

Status	2nd byte	3rd byte
BnH	ccH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
cc=Control change number : 01H - 1FH,40H - 5FH (1 - 31,64 - 95)
pp=Program number : 00H - 7FH (0 - 127)

* When received GS RESET,assigned effect of the control change to the slider1,2 and pedal.When selected a performance,assigned effect that determined to the performance to the slider1,2 and pedal.

● Program Change

Status	2nd byte
CnH	ppH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
pp=Program number : 00H - 7FH (prog.1 - prog.128)

* Not received when Rx.PROGRAM CHANGE = OFF. (Initial value is ON)
* After a Program Change message is received, the sound will change beginning with the next Note-on. Voices already sounding when the Program Change message was received will not be affected.
* For Drum Parts, Program Change messages will not be received on bank numbers 129 - 16384 (the value of Control Number 0 is other than 0(00H)).

● Channel Pressure

Status	2nd byte
DnH	vvH

n=MIDI channel number :0H - FH (ch.1 - ch.16)
vv=Channel Pressure :00H - 7FH (0 - 127)

* Not received when Rx.CH PRESSURE (CAf) = OFF. (Initial value is ON)
* The resulting effect is determined by System Exclusive messages. With the initial settings there will be no effect.

● Pitch Bend Change

Status	2nd byte	3rd byte
EnH	llH	mmH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm,ll=Pitch Bend value : 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

* Not received when Rx.PITCH BEND = OFF. (Initial value is ON)
* The resulting effect is determined by System Exclusive messages. With the initial settings the effect is Pitch Bend.

■ Channel Mode Messages

● All Sounds Off (Controller number 120)

Status	2nd byte	3rd byte
BnH	78H	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

* When this message is received, all currently-sounding notes on the corresponding channel will be turned off immediately.

● Reset All Controllers (Controller number 121)

Status	2nd byte	3rd byte
BnH	79H	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

* When this message is received, the following controllers will be set to their reset values.

Controller	Reset value
Pitch Bend Change	+/-0 (center)
Polyphonic Key Pressure	0 (off)
Channel Pressure	0 (off)
Modulation	0 (off)
Expression	127 (max)
Hold 1	0 (off)
Portamento	0 (off)
Sostenuto	0 (off)
Soft	0 (off)
RPN	unset; previously set data will not change
NRPN	unset; previously set data will not change

● **All Notes Off (Controller number 123)**

Status	2nd byte	3rd byte
BnH	7BH	00H

n=MIDI channel number : 0H - FH (ch.1 - ch.16)

* When All Notes Off is received, all notes on the corresponding channel will be turned off. However if Hold 1 or Sostenuto is ON, the sound will be continued until these are turned off.

● **OMNI OFF (Controller number 124)**

Status	2nd byte	3rd byte
BnH	7CH	00H

n=MIDI channel number : 0H - FH (ch.1 - ch.16)

* The same processing will be carried out as when All Notes Off is received.

● **OMNI ON (Controller number 125)**

Status	2nd byte	3rd byte
BnH	7DH	00H

n=MIDI channel number : 0H - FH (ch.1 - ch.16)

* OMNI ON is only recognized as "All notes off"; the Mode doesn't change (OMNI OFF remains).

● **MONO (Controller number 126)**

Status	2nd byte	3rd byte
BnH	7EH	mmH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm=mono number : 00H - 10H (0 - 16)

* The same processing will be carried out as when All Sounds Off and All Notes Off is received, and the corresponding channel will be set to Mode 4 (M=1) regardless of the value of "mono number".

● **POLY (Controller number 127)**

Status	2nd byte	3rd byte
BnH	7FH	00H

n=MIDI channel number : 0H - FH (ch.1 - ch.16)

* The same processing will be carried out as when All Sounds Off and All Notes Off is received, and the corresponding channel will be set to Mode 3.

■ System Realtime Message

● **Timing Clock**

Status
F8H

* Received when Sync Source is MIDI.When received Timing Clock,Arpeggio will played with tempo of intervals of this message.

● **Start**

Status
FAH

* Received when Sync Source is MIDI.When received this message,Arpeggio will be started from the first.

● **Continue**

Status
FBH

* Received when Sync Source is MIDI.If received this message when stopped Arpeggio by received "Stop",Arpeggio will be started from continued from the stopped position.

● **Stop**

Status
FCH

* Received when Sync Source is MIDI.When received this message,Arpeggio will be stopped.

● **Active Sensing**

Status
FEH

* When Active Sensing is received, the unit will begin monitoring the intervals of all further messages. While monitoring, if the interval between messages exceeds 420 ms, the same processing will be carried out as when All Sounds Off, All Notes Off and Reset All Controllers are received, and message interval monitoring will be halted.

■ System Exclusive Message

Status	Data byte	Status
F0H	iiH, ddH, ...,eeH	F7H

F0H : System Exclusive Message status
ii = ID number : an ID number (manufacturer ID) to indicate the manufacturer whose Exclusive message this is. Roland's manufacturer ID is 41H.
ID numbers 7EH and 7FH are extensions of the MIDI standard; Universal Non-realtime Messages (7EH) and Universal Realtime Messages (7FH).
dd,...,ee = data : 00H - 7FH (0 - 127)
F7H : EOX (End Of Exclusive)

The System Exclusive Messages received by the XP-10 are; messages related to mode settings, Universal Realtime System Exclusive messages, Data Requests (RQ1), and Data Set (DT1).

● **System exclusive messages related to mode settings**

These messages are used to initialize a device to GS or General MIDI mode. When creating performance data, a "Turn General MIDI System On" message should be inserted at the beginning of a General MIDI score, and a "GS Reset" message at the beginning of a GS music data. Each song should contain only one mode message as appropriate for the type of data. (Do not insert two or more mode setting messages in a single song.)
"Turn General MIDI System On" and "Turn General MIDI System Off" use Universal Non-realtime Message format."GS Reset" and "Exit GS mode use Roland system exclusive format "Data Set 1 (DT1)".

❍ **Turn General MIDI System On**

This is a command message that resets the internal settings of the unit to the General MIDI initial state (General MIDI System - Level 1). After receiving this message, (Model Name $$5) will automatically be set to the proper condition for correctly playing a General MIDI score.

Status	Data byte	Status
F0H	7EH, 7FH, 09H, 01H	F7H

Byte	Explanation	
F0H	Exclusive status	
7EH	ID number	(Universal Non-realtime Message)
7FH	Device ID	(Broadcast)
09H	Sub ID#1	(General MIDI Message)
01H	Sub ID#2	(General MIDI On)
F7H	EOX	(End Of Exclusive)

* When this message is received, Rx.BANK SELECT will be OFF and Rx.NRPN will be OFF.
* This message will not be received if "Rx.GS Reset SW = OFF, or "Rx.Sys.Ex.SW = OFF.
* There must be an interval of at least 50 ms between this message and the next message.

❍ **Turn General MIDI System Off**

This is a command message that resets the internal settings of the unit from General MIDI mode to state of turned on the power.

Status	Data byte	Status
F0H	7EH, 7FH, 09H, 02H	F7H

Byte	Explanation	
F0H	Exclusive status	
7EH	ID number	(Universal Non-realtime Message)
7FH	Device ID	(Broadcast)
09H	sub-ID#1	(General MIDI message)
02H	sub-ID#2	(General MIDI Off)
F7H	EOX	(End of exclusive)

* This message will not be received if "Rx.GS Reset SW = OFF,or "Rx.Sys.Ex.SW = OFF.
* There must be an interval of at least 50 ms between this message and the next.

❍ **GS reset**

GS Reset is a command message that resets the internal settings of a device to the GS initial state. This message will appear at the beginning of GS music data, and a GS device that receives this message will automatically be set to the proper state to correctly playback GS music data.

Status	Data byte	Status
F0H	41H, dev, 42H, 12H, 40H, 00H, 7FH, 00H, 41H	F7H

Byte	Explanation		
F0H	Exclusive status		
41H	ID number	(Roland)	
dev	Device ID	(dev: 00H - 1FH (1 - 32)	Initial value is 10H(17))
42H	Model ID	(GS)	
12H	Command ID	(DT1)	
40H	Address MSB		
00H	Address		
7FH	Address LSB		
00H	Data	(GS reset)	
41H	Checksum		
F7H	EOX	(End Of Exclusive)	

* When this message is received, Rx.NRPN will be ON.
* This message will not be received if "Rx.GS Reset SW = OFF, or "Rx.Sys.Ex.SW = OFF.
* There must be an interval of at least 50 ms between this message and the next.

❍ **Exit GS mode**

This is a command message that resets the internal settings of the unit from GS mode to state of turned on the power.

Status	Data byte	Status
F0H	41H, dev, 42H, 12H, 40H, 00H, 7FH, 7FH, 42H	F7H

Byte	Explanation		
F0H	Exclusive status		
41H	ID number	(Roland)	
dev	Device ID	(dev: 00H-1FH (1-32)	Initial value is 10H (17))
42H	Model ID	(GS)	
12H	Command ID	(DT1)	
40H	Address MSB		
00H	:		
7FH	Address LSB		
7FH	Data	(Exit GS mode)	
42H	Checksum		
F7H	EOX	(End of exclusive)	

* This message will not be received if "Rx.GS Reset SW = OFF,or "Rx.Sys.Ex.SW = OFF won't recognize this message.
* There must be an interval of at least 50 ms between this message and the next.

● Universal Realtime System Exclusive Messages

❍ Master volume

Status	Data byte	Status
F0H	7FH, 7FH, 04H, 01H, llH, mmH	F7H

Byte	Explanation	
F0H	Exclusive status	
7FH	ID number	(universal realtime message)
7FH	Device ID	(Broadcast)
04H	Sub ID#1	(Device Control messages)
01H	Sub ID#2	(Master Volume)
llH	Master volume lower byte	
mmH	Master volume upper byte	
F7H	EOX	(End Of Exclusive)

* The lower byte (llH) of Master Volume will be handled as 00H.
* This message will not be received if "Rx.GS Reset SW = OFF, or "Rx.Sys.Ex.SW = OFF.

● Universal Non-realtime System Exclusive Messages

❍ Inquiry Request

Status	Data byte	Status
F0H	7EH, dev, 06H, 01H	F7H

Byte	Explanation	
F0H	Exclusive status	
7FH	ID number	(universal non-realtime message)
dev	Device ID	(dev: 00H - 1FH Initial value is 10H(17))
06H,01H	Inquiry Request	
F7H	EOX	(End Of Exclusive)

* When Inquiry Request is received,Inquiry Reply message will be transmitted.
* Regarding the Inquiry Reply,please refer to page 84.
* Even if Device ID is 7FH(Broadcast),Inquiry Reply message will be transmitted.

❍ Data transmission

XP-10 can transmit and receive the various parameters using System Exclusive messages.
The exclusive message of GS Format data has a model ID of 42H and a device ID of 11H (18), and it is common to all the GS devices.

❍ Request data 1 RQ1

This message requests the other device to send data. The Address and Size determine the type and amount of data to be sent.
When a Data Request message is received, if the device is ready to transmit data and if the address and size are appropriate, the requested data will be transmitted as a "Data Set 1 (DT1)" message. If not, nothing will be transmitted.

Status	Data byte	Status
F0H	41H, dev, 42H, 11H, aaH, bbH, ccH, ssH, ttH, uuH, sum	F7H

Byte	Explanation	
F0H	Exclusive status	
41H	ID number	(Roland)
dev	Device ID	(dev: 00H - 1FH Initial value is 10H(17))
mod	Model ID	(mod: GS=42H, XP-10=7BH)
11H	Command ID	(RQ1)
aaH	Address MSB	: upper byte of the starting address of the requested data
bbH	Address	: middle byte of the starting address of the requested data
ccH	Address LSB	: lower byte of the starting address of the requested data
ssH	Size MSB	
ttH	Size	
uuH	Size LSB	
sum	Checksum	
F7H	EOX	(End Of Exclusive)

* The amount of data that can be transmitted at once time will depend on the type of data, and data must be requested using a specific starting address and size. Refer to the Address and Size listed in Section 3 (Page 84).
* Regarding the checksum please refer to Section 4 (Page 91).

❍ Data set 1 DT1

This is the message that actually performs data transmission, and is used when you wish to transmit the data.

Status	Data byte	Status
F0H	41H, dev, 42H, 12H, aaH, bbH, ccH, ddH, ... eeH, sum	F7H

Byte	Explanation	
F0H	Exclusive status	
41H	ID number	(Roland)
dev	Device ID	(dev: 00H - 1FH Initial value is 10H(17))
mod	Model ID	(mod: GS=42H, XP-10=7BH)
12H	Command ID	(DT1)
aaH	Address MSB	: upper byte of the starting address of the transmitted data
bbH	Address	: middle byte of the starting address of the transmitted data
ccH	Address LSB	: lower byte of the starting address of the transmitted data
ddH	Data	: the actual data to be transmitted. Multiple bytes of data are transmitted starting from the address.
:	:	
eeH	Data	
sum	Checksum	
F7H	EOX	(End Of Exclusive)

* The amount of data that can be transmitted at one time depends on the type of data, and data can be received only from the specified starting address and size. Refer to the Address and Size given in Section 3 (Page84).
* Data larger than 128 bytes must be divided into packets of 128 bytes or less. If "Data Set 1" is transmitted successively, there must be an interval of at least 40 ms between packets.
* Regarding the checksum please refer to section 4 (Page 91).

Section 2. Transmit data

■ Channel Voice Messages

The message is transmitted through the Tx Channel set in the MIDI Function.When set to PART transmission takes place on the MIDI receive channel set for the currently Part.

● Note off

Status	2nd byte	3rd byte
8nH	kkH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
kk=note number : 00H - 7FH (0 - 127)
vv=note off velocity : 00H - 7FH (0 - 127)

● Note on

Status	2nd byte	3rd byte
9nH	kkH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
kk=note number : 00H - 7FH (0 - 127)
vv=note on velocity : 01H - 7FH (1 - 127)

● Control Change

* By selecting a Control Change Number that corresponds to the setting of the System Setup Slider1 CC#/Slider2 CC#/Pedal CC#, you can transmit any desired control change. The settings will be transmit on the transmit channel of current part.

❍ Bank Select (Controller number 0,32)

Status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm,ll=Bank number :00H,00H - 7FH,7FH (bank.1 - bank.16384) Initial Value = 00 00H (bank.1)

* This message is transmitted when tone change is made on the panel or "Send GS Setup"is executed.

❍ Modulation (Controller number 1)

Status	2nd byte	3rd byte
BnH	01H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Modulation depth : 00H - 7FH (0 - 127)

* This message is transmitted when the Modulation Lever is used.

❍ Portamento Time (Controller number 5)

Status	2nd byte	3rd byte
BnH	05H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Portamento Time : 00H - 7FH (0 - 127) Initial value = 00H (OFF)

* The current setting value is transmitted when the Portamento Time set to 1 - 127.

❍ Data Entry (Controller number 6,38)

Status	2nd byte	3rd byte
BnH	06H	mmH
BnH	26H	llH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm,ll= the value of the parameter specified by RPN/NRPN

* This message is transmitted when tone change is made on the panel or "Send GS/General MIDI Setup" is executed.

❍ Volume (Controller number 7)

Status	2nd byte	3rd byte
BnH	07H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Volume : 00H - 7FH (0 - 127) Initial value= 64H (100)

* This message is transmitted when "Send GS/General MIDI Setup" is executed.

❍ Pan (Controller number 10)

Status	2nd byte	3rd byte
BnH	0AH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=pan : 00H - 40H - 7FH (Left - Center - Right) Initial value = 40H (Center)

* This message is transmitted when "Send GS/General MIDI Setup" is executed.

❍ Expression (Controller number 11)

Status	2nd byte	3rd byte
BnH	0BH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Expression : 00H - 7FH (0 - 127) Initial value = 7FH (127)

* This message is transmitted when the pedal in operated with PEDAL Asgn set to EXPRESSION.

❍ Hold 1 (Controller number 64)

Status	2nd byte	3rd byte
BnH	40H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) 0-63=OFF 64-127=ON

* This message is transmitted when the pedal in operated with PEDAL Asgn set to HOLD.

○ **Portamento (Controller number 65)**

Status	2nd byte	3rd byte
BnH	41H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) 0-63=OFF 64-127=ON

* Transmitted when Porta Time will be switched OFF/1-127.

○ **Sostenuto (Controller number 66)**

Status	2nd byte	3rd byte
BnH	42H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) 0-63=OFF 64-127=ON

○ **Soft (Controller number 67)**

Status	2nd byte	3rd byte
BnH	43H	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) 0-63=OFF 64-127=ON

○ **Portamento control (Controller number 84)**

Status	2nd byte	3rd byte
BnH	54H	kkH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
kk=source note number : 00H - 7FH (0 - 127)

○ **Effect 1 (Reverb Send Level) (Controller number 91)**

Status	2nd byte	3rd byte
BnH	5BH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) Initial value = 28H (40)

* This message is transmitted when "Send GS/General MIDI Setup" is executed.

○ **Effect 3 (Chorus Send Level) (Controller number 93)**

Status	2nd byte	3rd byte
BnH	5DH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
vv=Control value : 00H - 7FH (0 - 127) Initial value = 00H (0)

* This message is transmitted when "Send GS/General MIDI Setup" is executed.

○ **NRPN MSB/LSB (Controller number 98,99)**

Status	2nd byte	3rd byte
BnH	63H	mmH
BnH	62H	llH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm=upper byte of the parameter number specified by NRPN
ll=lower byte of the parameter number specified by NRPN

* This message is transmitted when tone change is made on the panel or "Send GS/General MIDI Setup" is executed.

"NRPN"
XP-10 transmits NRPN with Bank select and program change corresponding to the tone when tone change is made.
However,NRPN is not transmitted when "User Bank Select Tx = ON".

NRPN MSB LSB	Data entry MSB	Description
01H 08H	mmH	Vibrato rate (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 09H	mmH	Vibrato depth (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 0AH	mmH	Vibrato delay (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 20H	mmH	TVF cutoff frequency (relative change on specified channel) mm: 0EH - 40H - 50H (-50 - 0 - +16)
01H 21H	mmH	TVF resonance (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 63H	mmH	TVF&TVA Env. Attack time (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 64H	mmH	TVF&TVA Env. Decay time (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)
01H 66H	mmH	TVF&TVA Env. Release time (relative change on specified channel) mm: 0EH - 40H - 72H (-50 - 0 - +50)

* Data entry LSB is ignored.

○ **RPN MSB/LSB (Controller number 100,101)**

Status	2nd byte	3rd byte
BnH	65H	mmH
BnH	64H	llH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm=upper byte of parameter number specified by RPN
ll=lower byte of parameter number specified by RPN

* This message is transmitted when tone change is made on the panel or "Send GS/General MIDI Setup" is executed.

"RPN"
XP-10 can transmit Pitch bend sensitivity and RPN null.

RPN MSB LSB	Data entry MSB LSB	Explanation
00H 00H	mmH ---	Pitch Bend Sensitivity mm: 00H - 18H (0 - 24 semitones) Initial value = 02H (2 semitones)
7FH 7FH	--- ---	RPN null Return to disable condition.

○ **Ext Control Number**

Status	2nd byte	3rd byte
BnH	ccH	vvH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
cc=Control change number : 01H - 1FH,40H - 5FH (1 - 31,64 - 95)
pp=Program number : 00H - 7FH (0 - 127)

* Designated the control change number transmitted with slider1,2 and pedal.

● **Program Change**

Status	2nd byte
CnH	ppH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
pp=Program number : 00H - 7FH (prog.1 - prog.128)

* This message is transmitted when tone change is made on the panel or "Send GS/General MIDI Setup" is executed.

● **Pitch Bend Change**

Status	2nd byte	3rd byte
EnH	llH	mmH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm,ll=Pitch Bend value : 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

* This message is transmitted when the Pitch Bender is operated.However,Pitch Bend Change is not transmitted when the PALETTE SELECT button on the panel is turned on.

■ Channel Mode Messages

● **All Sounds Off (Controller number 120)**

Status	2nd byte	3rd byte
BnH	78H	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

* This message is transmitted when used to change part or MIDI receive channel.

● **Reset All Controllers (Controller number 121)**

Status	2nd byte	3rd byte
BnH	79H	00H

n=MIDI channel number :0H - FH (ch.1 - ch.16)

* This message is transmitted when used to change part or MIDI receive channel.

● **All Notes Off (Controller number 123)**

Status	2nd byte	3rd byte
BnH	7BH	00H

n=MIDI channel number : 0H - FH (ch.1 - ch.16)

* This message is transmitted when used to change part or MIDI receive channel.

● **MONO (Controller number 126)**

Status	2nd byte	3rd byte
BnH	7EH	mmH

n=MIDI channel number : 0H - FH (ch.1 - ch.16)
mm=mono number : 00H - 10H (0 - 16)

* This message is transmitted when the Solo Switch is ON.

● **POLY (Controller number 127)**

Status	2nd byte	3rd byte
BnH	7FH	00H

n=MIDI channel number : 0H - FH (ch.1 - ch.16)

* This message is transmitted when the Solo Switch is ON.

■ System Realtime Message

● **Start**

Status
FAH

* Whenever press "SEQ CTRL"on the panel,transmitted alternately "Start" and "Stop".

● **Stop**

Status
FCH

* Whenever press "SEQ CTRL"on the panel,transmitted alternately "Start" and "Stop"

● **Active sensing**

Status
FEH

* This will be transmitted constantly at intervals of approximately 250ms.

■ **System exclusive messages**

● **System exclusive messages related to mode settings**

❍ **Turn General MIDI System On**

Status	Data byte	Status
F0H	7EH, 7FH, 09H, 01H	F7H

Byte	Explanation	
F0H	Exclusive status	
7EH	ID number	(Universal Non-realtime Message)
7FH	Device ID	(Broadcast)
09H	Sub ID#1	(General MIDI Message)
01H	Sub ID#2	(General MIDI On)
F7H	EOX	(End Of Exclusive)

* This message is transmitted when "Send General MIDI Setup" is executed.

❍ **GS reset**

Status	Data byte	Status
F0H	41H, dev, 42H, 12H, 40H, 00H, 7FH, 00H, 41H	F7H

Byte	Explanation		
F0H	Exclusive status		
41H	ID number	(Roland)	
dev	Device ID	(dev: 00H - 1FH (1 - 32)	Initial value is 10H(17))
42H	Model ID	(GS)	
12H	Command ID	(DT1)	
40H	Address MSB		
00H	Address		
7FH	Address LSB		
00H	Data	(GS reset)	
41H	Checksum		
F7H	EOX	(End Of Exclusive)	

* This message is transmitted when "Send GS Setup" is executed.

● **Universal Non-realtime System Exclusive Messages**

❍ **Inquiry reply**

Status	Data byte	Status
F0H	7EH,dev,06H,02H,41H,42H,00H,02H,01H,09H,01H,00H,00H	F7H

Byte	Explanation		
F0H	Exclusive status		
7EH	ID number	(Universal Non-realtime Message)	
dev	Device ID	(dev: 00H - 1FH (1 - 32)	Initial value is 10H(17))
06H,02H	Inquiry reply		
41H	ID number	(Roland)	
42H,00H	Device Family Code		
02H,01H	Device Family Number Code		
09H,01H,00H,00H	Software Revision Level		
F7H	EOX	(End Of Exclusive)	

* When Inquiry Request is received,Inquiry reply Message will be transmitted.
* Regarding the Inquiry Request,please refer to page 82.

● **Data transmission**

When an appropriate "Data Request 1 (RQ1)" message is received, the requested internal data will be transmitted.

❍ **Data set 1 DT1**

Status	Data byte	Status
F0H	41H, dev, 42H, 12H, aaH, bbH, ccH, ddH, ... eeH, sum	F7H

Byte	Explanation	
F0H	Exclusive status	
41H	ID number	(Roland)
dev	Device ID	(dev: 00H - 1FH (1 - 32) Initial value is 10H(17))
mod	Model ID	(mod: GS=42H, XP-10=7BH)
12H	Command ID	(DT1)
aaH	Address MSB	: upper byte of the starting address of the data to be sent
bbH	Address	: middle byte of the starting address of the data to be sent
ccH	Address LSB	: lower byte of the starting address of the data to be sent.
ddH	Data	: the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address.
:	:	
eeH	Data	
sum	Checksum	
F7H	EOX	(End Of Exclusive)

* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the Address and Size given in Section 3 (Page 84).
* Data larger than 128 bytes will be divided into packets of 128 bytes or less, and each packet will be sent at an interval of about 40ms.
* Regarding the checksum please refer to section 4 (Page 91).

Section 3. Parameter Address Map

This map indicates address, size, Data (range), Parameter, Description, and Default Value of parameters which can be transferred using "Request data 1 (RQ1)" and "Data set 1 (DT1)".
All the numbers of address, size, Data, and Default Value are indicated in 7-bit Hexadecimal-form.

■ **Address Block map**

An outlined address map of the Exclusive Communication is as follows:

<XP-10 (Model ID=7BH) >

```
Address (H)                Block
10 00 00 +-------------------------------------+
         | SYSTEM SETUP PARAMETERS             | Bulk
10 00 2B +-------------------------------------+
20 00 00 +-------------------------------------+
         | USER PERFORMANCE PARAMETERS         | Bulk
22 0F 7F +-------------------------------------+
26 00 00 +-------------------------------------+
         | PERFORMANCE TEMPORARY PARAMETERS    | Bulk
28 04 1F +-------------------------------------+
30 00 00 +-------------------------------------+
         | USER TONE PARAMETERS                | Bulk
30 27 7F +-------------------------------------+
38 00 00 +-------------------------------------+
         | USER DRUM SET PARAMETERS            | Bulk
39 20 4F +-------------------------------------+
```

<GS (Model ID=42H) >

```
Address (H)                Block
40 00 00 +-------------------------------------+
         | SYSTEM PARAMETERS                   | Individual
40 01 3F +-------------------------------------+
40 1x 00 +-------------------------------------+
         | PART PARAMETERS                     | Individual
         | (x = 0-F)                           |
40 2x 5A +-------------------------------------+
41 m0 00 +-------------------------------------+
         | DRUM SETUP PARAMETERS               | Individual
         | (m = 0-1)                           |
41 m8 7F +-------------------------------------+

48 00 00 +-------------------------------------+
         | SYSTEM PARAMETERS                   | Bulk
48 01 10 +-------------------------------------+
         | PART PARAMETERS                     | Bulk
48 1D 0F +-------------------------------------+
49 m0 00 +-------------------------------------+
         | DRUM SETUP PARAMETERS               | Bulk
         | (m = 0-1)                           |
49 mE 17 +-------------------------------------+
```

There are two ways in which GS data is transmitted: Individual Parameter Transmission in which individual parameters are transmitted one by one, and Bulk Dump Transmission in which a large amount of data is transmitted at once.

■ Individual Parameters

Individual Parameter Transmission transmits data (or requests data) for one parameter as one exclusive message (one packet of "F0 ..... F7").
In Individual Parameter Transmission, you must use the Address and Size listed in the following "Parameter Address Map". Addresses marked at "#" cannot be used as starting addresses.

<GS (Model ID=42H) >

● System Parameters

Parameters related to the system of the device are called System Parameters.

Address(H)	Size(H)	Data(H)	Parameter	Description	Default Value (H)	Description
40 00 00 00 00 04	0018 - 07E8	MASTER TUNE	-100.0 - +100.0 [cent]	00 04 00 00	0 [cent]	
40 00 01#			Use nibblized data.			
40 00 02#						
40 00 03#						
	* Refer to section 4. Supplementary material, "About tuning"(Page 91).					
40 00 04 00 00 01	00 - 7F	MASTER VOLUME (= F0 7F 7F 04 01 00 vv F7)	0 - 127	7F	127	
40 00 05 00 00 01	28 - 58	MASTER KEY-SHIFT	-24 - +24 [semitones]	40	0[semitones]	
40 00 06 00 00 01	01 - 7F	MASTER PAN	-63 (LEFT) - +63 (RIGHT)	40	0 (CENTER)	
40 00 7F 00 00 01	00	MODE SET (Rx. only)	00 = GS Reset 127 = Exit GS			
	* Refer to "System exclusive messages related to Mode settings"(Page 81).					
40 01 10	00 00 10	00 - 1BH	VOICE RESERVE	Part 10(Drum Part)	02	2
40 01 11#				Part 1	06	6
40 01 12#				Part 2	02	2
40 01 13#				Part 3	02	2
40 01 14#				Part 4	02	2
40 01 15#				Part 5	02	2
40 01 16#				Part 6	02	2
40 01 17#				Part 7	02	2
40 01 18#				Part 8	02	2
40 01 19#				Part 9	02	2
40 01 1A#				Part 11	00	0
40 01 :#				:		
40 01 1F#				Part 16	00	0
	* The sum total of voices in the voice reserve function must be equal to or less than the number of the maximum polyphony. The maximum polyphony of the XP-10 is 28. For compatibility with other GS models, it is recommended that the maximum polyphony be equal or less than 28.					
40 01 30	00 00 01	00 - 07	REVERB MACRO	00: Room 1 01: Room 2 02: Room 3 03: Hall 1 04: Hall 2 05: Plate 06: Delay 07: Panning Delay	04	Hall 2
40 01 31	00 00 01	00 - 07	REVERB CHARACTER	0 - 7	04	4
40 01 32	00 00 01	00 - 07	REVERB PRE-LPF	0 - 7	00	0
40 01 33	00 00 01	00 - 7F	REVERB LEVEL	0 - 127	40	4
40 01 34	00 00 01	00 - 7F	REVERB TIME	0 - 127	40	64
40 01 35	00 00 01	00 - 7F	REVERB DELAY FEEDBACK	0 - 127	00	0
40 01 36	00 00 01	00 - 7F	REVERB SEND LEVEL TO CHORUS	0 - 127	00	0
	* REVERB MACRO is a macro parameter that allows global setting of reverb parameters. When you select the reverb type with REVERB MACRO, each reverb parameter will be set to the most suitable value. * REVERB CHARACTER is a parameter that changes the reverb algorithm. The value of REVERB CHARACTER corresponds to the REVERB MACRO of the same number.					
40 01 38	00 00 01	00 - 07	CHORUS MACRO	00: Chorus 1 01: Chorus 2 02: Chorus 3 03: Chorus 4 04: Feedback Chorus 05: Flanger 06: Short Delay 07: Short Delay (FB)	02	Chorus 3
40 01 39	00 00 01	00 - 07	CHORUS PRE-LPF	0 - 7	00	0
40 01 3A	00 00 01	00 - 7F	CHORUS LEVEL	0 - 127	40	64
40 01 3B	00 00 01	00 - 7F	CHORUS FEEDBACK	0 - 127	08	8
40 01 3C	00 00 01	00 - 7F	CHORUS DELAY	0 - 127	50	80
40 01 3D	00 00 01	00 - 7F	CHORUS RATE	0 - 127	03	3
40 01 3E	00 00 01	00 - 7F	CHORUS DEPTH	0 - 127	13	19
40 01 3F	00 00 01	00 - 7F	CHORUS SEND LEVEL TO REVERB	0 - 127	00	0
	* CHORUS MACRO is a macro parameter that allows global setting of chorus parameters. When you use CHORUS MACRO to select the chorus type, each chorus parameter will be set to the most suitable value.					

● Part Parameters

XP-10 has 16 parts. Parameters that can be set individually for each Part are called Part parameters.
If you use exclusive messages to set Part parameters, specify the address by Block number rather than Part Number (normally the same number as the MIDI channel). The Block number can be specified as one of 16 blocks, from 0(H) to F(H).

The relation between Part number and Block number is as follows.

x...BLOCK NUMBER (0 - F), Part 1 (MIDI ch = 1) x=1
Part 2 (MIDI ch = 2) x=2
: : :
Part 9 (MIDI ch = 9) x=9
Part10 (MIDI ch =10) x=0
Part11 (MIDI ch =11) x=A
Part12 (MIDI ch =12) x=B
: : :
Part16 (MIDI ch =16) x=F

Address(H)	Size(H)	Data(H)	Parameter	Description	Default Value (H)	Description
40 1x 00	00 00 02	00 - 7F	TONE NUMBER	CC#00 VALUE 0 - 127	00	0
40 1x 01#		00 - 7F		P.C. VALUE 1 - 128	00	1
40 1x 02	00 00 01	00 - 10	Rx. CHANNEL	1 - 16,OFF	Same as the Part Number	
40 1x 03	00 00 01	00 - 01	Rx. PITCH BEND	OFF / ON	01	ON
40 1x 04	00 00 01	00 - 01	Rx. CH PRESSURE(CAf)	OFF / ON	01	ON
40 1x 05	00 00 01	00 - 01	Rx. PROGRAM CHANGE	OFF / ON	01	ON
40 1x 06	00 00 01	00 - 01	Rx. CONTROL CHANGE	OFF / ON	01	ON
40 1x 07	00 00 01	00 - 01	Rx. POLY PRESSURE(PAf)	OFF / ON	01	ON
40 1x 08	00 00 01	00 - 01	Rx. NOTE MESSAGE	OFF / ON	01	ON
40 1x 09	00 00 01	00 - 01	Rx. RPN	OFF / ON	01	ON
40 1x 0A	00 00 01	00 - 01	Rx. NRPN	OFF / ON	00(01*)	OFF(ON*)
	* Rx. NRPN is set to OFF by power-on or by receiving "Turn General MIDI System On", and it will be set ON when "GS RESET" is received.					
40 1x 0B	00 00 01	00 - 01	Rx. MODULATION	OFF / ON	01	ON
40 1x 0C	00 00 01	00 - 01	Rx. VOLUME	OFF / ON	01	ON
40 1x 0D	00 00 01	00 - 01	Rx. PANPOT	OFF / ON	01	ON
40 1x 0E	00 00 01	00 - 01	Rx. EXPRESSION	OFF / ON	01	ON
40 1x 0F	00 00 01	00 - 01	Rx. HOLD1	OFF / ON	01	ON
40 1x 10	00 00 01	00 - 01	Rx. PORTAMENTO	OFF / ON	01	ON
40 1x 11	00 00 01	00 - 01	Rx. SOSTENUTO	OFF / ON	01	ON
40 1x 12	00 00 01	00 - 01	Rx. SOFT	OFF / ON	01	ON
40 1x 13	00 00 01	00 - 01	MONO/POLY MODE (=CC# 126 01 / CC# 127 00)	Mono / Poly	01	Poly
40 1x 14	00 00 01	00 - 02	ASSIGN MODE	0 = SINGLE 1 =LIMITED-MULTI 2 = FULL-MULTI	00 at x=0 01 at x≠0	SINGLE at x=0 LIMITED-MULTI at x≠0
	* ASSIGN MODE is the parameter that determines how voice assignment will be handled when sounds overlap on identical note numbers in the same channel (i.e., repeatedly struck notes). This is initialized to a mode suitable for each Part, so for general purposes there is no need to change this.					
40 1x 15 00 00 01	00 - 02		USE FOR RHYTHM PART	0 = OFF 1 = MAP1 2 = MAP2	00 at x≠0 01 at x=0	OFF at x≠0 MAP1 at x≠0
	* This parameter sets the Drum Map of the Part used as the Drum Part. XP-10 can simultaneously (in different Parts) use up to two Drum Maps (MAP1, MAP2). With the initial settings, Part10 (MIDI CH=10, x=0) is set to MAP1 (1), and other Parts are set to normal instrumental Parts (OFF(0)).					
40 1x 16	00 00 01	28 - 58	PITCH KEY SHIFT	-24 - +24 [semitones]	40	0 [semitones]
40 1x 17	00 00 02	08 - F8	PITCH OFFSET FINE	-12.0 - +12.0 [Hz]	08 00	0 [Hz]
40 1x 18#				Use nibblized data.		
	*PITCH OFFSET FINE allows you to alter, by a specified frequency amount, the pitch at which notes will sound. This parameter differs from the conventional Fine Tuning (RPN #1) parameter in that the amount of frequency alteration (in Hertz) will be identical no matter which note is played. When a multiple number of Parts, each of which has been given a different setting for PITCH OFFSET FINE, are sounded by means of an identical note number, you can obtain a Celeste effect.					
40 1x 19	00 00 01	00 - 7F	PART LEVEL (=CC# 7)	0 - 127	64	100
40 1x 1A	00 00 01	00 - 7F	VELOCITY SENSE DEPTH	0 - 127	40	64
40 1x 1B	00 00 01	00 - 7F	VELOCITY SENSE OFFSET	0 - 127	40	64
40 1x 1C	00 00 01	00 - 7F	PART PANPOT (=CC# 10, except RANDOM)	-64(RANDOM), -63(LEFT) - +63(RIGHT)	40	0 (CENTER)
40 1x 1D	00 00 01	00 - 7F	KEY RANGE LOW	(C-1) - (G9)	00	C-1
40 1x 1E	00 00 01	00 - 7F	KEY RANGE HIGH	(C-1) - (G9)	7F	G 9
40 1x 1F	00 00 01	00 - 5F	CC1 CONTROLLER NUMBER	0 - 95	10	16
40 1x 20	00 00 01	00 - 5F	CC2 CONTROLLER NUMBER	0 - 95	11	17
40 1x 21	00 00 01	00 - 7F	CHORUS SEND LEVEL (=CC# 93)	0 - 127	00	0
40 1x 22	00 00 01	00 - 7F	REVERB SEND LEVEL (=CC# 91)	0 - 127	28	40
40 1x 23	00 00 01	00 - 01	Rx. BANK SELECT	OFF / ON	01(00*)	ON(OFF*)
	*Rx. BANK SELECT is set to ON by power-on or by receiving "GS RESET", and will be set OFF when "Turn General MIDI System On"is received.					
40 1x 30 00 00 01	0E - 72		TONE MODIFY 1	-50 - +50 Vibrato rate (=NRPN# 8)	40	0
40 1x 31 00 00 01	0E - 72		TONE MODIFY 2	-50 - +50 Vibrato depth (=NRPN# 9)	40	0
40 1x 32 00 00 01	0E - 50		TONE MODIFY 3	-50 - +16 TVF cutoff frequency (=NRPN# 32)	40	0
40 1x 33 00 00 01	0E - 72		TONE MODIFY 4	-50 - +50 TVF resonance (=NRPN# 33)	40	0
40 1x 34 00 00 01	0E - 72		TONE MODIFY 5	-50 - +50 TVF&TVA Env.attack (=NRPN# 99)	40	0
40 1x 35 00 00 01	0E - 72		TONE MODIFY 6	-50 - +50 TVF&TVA Env.decay (=NRPN# 100)	40	0
40 1x 36 00 00 01	0E - 72		TONE MODIFY 7	-50 - +50 TVF&TVA Env.release (=NRPN# 102)	40	0
40 1x 37 00 00 01	0E - 72		TONE MODIFY 8	-50 - +50 Vibrato delay (=NRPN# 10)	40	0

40 1x 40	00 00 0C	00 - 7F	SCALE TUNING C	-64 - +63 [cent]	40	0 [cent]
40 1x 41#		00 - 7F	SCALE TUNING C#	-64 - +63 [cent]	40	0 [cent]
40 1x 42#		00 - 7F	SCALE TUNING D	-64 - +63 [cent]	40	0 [cent]
40 1x 43#		00 - 7F	SCALE TUNING D#	-64 - +63 [cent]	40	0 [cent]
40 1x 44#		00 - 7F	SCALE TUNING E	-64 - +63 [cent]	40	0 [cent]
40 1x 45#		00 - 7F	SCALE TUNING F	-64 - +63 [cent]	40	0 [cent]
40 1x 46#		00 - 7F	SCALE TUNING F#	-64 - +63 [cent]	40	0 [cent]
40 1x 47#		00 - 7F	SCALE TUNING G	-64 - +63 [cent]	40	0 [cent]
40 1x 48#		00 - 7F	SCALE TUNING G#	-64 - +63 [cent]	40	0 [cent]
40 1x 49#		00 - 7F	SCALE TUNING A	-64 - +63 [cent]	40	0 [cent]
40 1x 4A#		00 - 7F	SCALE TUNING A#	-64 - +63 [cent]	40	0 [cent]
40 1x 4B#		00 - 7F	SCALE TUNING B	-64 - +63 [cent]	40	0 [cent]

*SCALE TUNING is a function that allows fine adjustment to the pitch of each note in the octave. The pitch of each identically-named note in all octaves will change simultaneously. A setting of +/- 0 cent (40H) is equal temperament. Refer to section 4. Supplementary material, "The Scale Tune Feature"(p-91).

40 2x 00	00 00 01	28 - 58	MOD PITCH CONTROL	-24 - +24 [semitone]	40	0 [semitones]
40 2x 01	00 00 01	00 - 7F	MOD TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 02	00 00 01	00 - 7F	MOD AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 03	00 00 01	00 - 7F	MOD LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 04	00 00 01	00 - 7F	MOD LFO1 PITCH DEPTH	0 - 600 [cent]	0A	47 [cent]
40 2x 05	00 00 01	00 - 7F	MOD LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 06	00 00 01	00 - 7F	MOD LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 07	00 00 01	00 - 7F	MOD LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 08	00 00 01	00 - 7F	MOD LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 09	00 00 01	00 - 7F	MOD LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 0A	00 00 01	00 - 7F	MOD LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 10	00 00 01	40 - 58	BEND PITCH CONTROL	0 - 24 [semitone]	42	2 [semitones]
40 2x 11	00 00 01	00 - 7F	BEND TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 12	00 00 01	00 - 7F	BEND AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 13	00 00 01	00 - 7F	BEND LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 14	00 00 01	00 - 7F	BEND LFO1 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 15	00 00 01	00 - 7F	BEND LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 16	00 00 01	00 - 7F	BEND LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 17	00 00 01	00 - 7F	BEND LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 18	00 00 01	00 - 7F	BEND LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 19	00 00 01	00 - 7F	BEND LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 1A	00 00 01	00 - 7F	BEND LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 20	00 00 01	28 - 58	CAf PITCH CONTROL	-24 - +24 [semitone]	40	0 [semitones]
40 2x 21	00 00 01	00 - 7F	CAf TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 22	00 00 01	00 - 7F	CAf AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 23	00 00 01	00 - 7F	CAf LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 24	00 00 01	00 - 7F	CAf LFO1 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 25	00 00 01	00 - 7F	CAf LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 26	00 00 01	00 - 7F	CAf LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 27	00 00 01	00 - 7F	CAf LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 28	00 00 01	00 - 7F	CAf LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 29	00 00 01	00 - 7F	CAf LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 2A	00 00 01	00 - 7F	CAf LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 30	00 00 01	28 - 58	PAf PITCH CONTROL	-24 - +24 [semitone]	40	0 [semitones]
40 2x 31	00 00 01	00 - 7F	PAf TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 32	00 00 01	00 - 7F	PAf AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 33	00 00 01	00 - 7F	PAf LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 34	00 00 01	00 - 7F	PAf LFO1 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 35	00 00 01	00 - 7F	PAf LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 36	00 00 01	00 - 7F	PAf LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 37	00 00 01	00 - 7F	PAf LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 38	00 00 01	00 - 7F	PAf LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 39	00 00 01	00 - 7F	PAf LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 3A	00 00 01	00 - 7F	PAf LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 40	00 00 01	28 - 58	CC1 PITCH CONTROL	-24 - +24 [semitone]	40	0 [semitones]
40 2x 41	00 00 01	00 - 7F	CC1 TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 42	00 00 01	00 - 7F	CC1 AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 43	00 00 01	00 - 7F	CC1 LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 44	00 00 01	00 - 7F	CC1 LFO1 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 45	00 00 01	00 - 7F	CC1 LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 46	00 00 01	00 - 7F	CC1 LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 47	00 00 01	00 - 7F	CC1 LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 48	00 00 01	00 - 7F	CC1 LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 49	00 00 01	00 - 7F	CC1 LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 4A	00 00 01	00 - 7F	CC1 LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 50	00 00 01	28 - 58	CC2 PITCH CONTROL	-24 - +24 [semitone]	40	0 [semitones]
40 2x 51	00 00 01	00 - 7F	CC2 TVF CUTOFF CONTROL	-9600 - +9600 [cent]	40	0 [cent]
40 2x 52	00 00 01	00 - 7F	CC2 AMPLITUDE CONTROL	-100.0 - +100.0 [%]	40	0 [%]
40 2x 53	00 00 01	00 - 7F	CC2 LFO1 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 54	00 00 01	00 - 7F	CC2 LFO1 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 55	00 00 01	00 - 7F	CC2 LFO1 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 56	00 00 01	00 - 7F	CC2 LFO1 TVA DEPTH	0 - 100.0 [%]	00	0 [%]
40 2x 57	00 00 01	00 - 7F	CC2 LFO2 RATE CONTROL	-10.0 - +10.0 [Hz]	40	0 [Hz]
40 2x 58	00 00 01	00 - 7F	CC2 LFO2 PITCH DEPTH	0 - 600 [cent]	00	0 [cent]
40 2x 59	00 00 01	00 - 7F	CC2 LFO2 TVF DEPTH	0 - 2400 [cent]	00	0 [cent]
40 2x 5A	00 00 01	00 - 7F	CC2 LFO2 TVA DEPTH	0 - 100.0 [%]	00	0 [%]

● **Drum Setup Parameters**

* m: Map number (0 = MAP1, 1 = MAP2)
* rr: drum part note number (00H - 7FH)

Address(H)	Size(H)	Data(H)	Parameter	Description
41 m1 rr	00 00 01	28 - 58	PLAY NOTE NUMBER	Pitch coarse
41 m2 rr	00 00 01	00 - 7F	LEVEL	TVA level
			(=NRPN# 26)	
41 m3 rr	00 00 01	00 - 7F	ASSIGN GROUP NUMBER	Non, 1 - 127
41 m4 rr	00 00 01	00 - 7F	PANPOT	-64(RANDOM), -63(LEFT) - +63(RIGHT)
			(=NRPN# 28, except RANDOM)	
41 m5 rr	00 00 01	00 - 7F	REVERB SEND LEVEL	0.0 - 1.0
			(=NRPN# 29)	Multiplicand of the part reverb depth
41 m6 rr	00 00 01	00 - 7F	CHORUS SEND LEVEL	0.0 - 1.0
			(=NRPN# 30)	Multiplicand of the part chorus depth
41 m7 rr	00 00 01	00 - 01	Rx. NOTE OFF	OFF / ON
41 m8 rr	00 00 01	00 - 01	Rx. NOTE ON	OFF / ON

* When the Drum Set is changed, DRUM SETUP PARAMETER values will all be initialized.

■ Bulk Dump

Bulk Dump allows you to transmit a large amount of data at once, and is convenient for storing settings for the entire unit on a computer or sequencer.

To make XP-10 a Bulk Dump transmission, send it a "Bulk Dump Request" message. For Bulk Dump Request, you must use the Address and Size listed in the following "Parameter Map". Addresses marked at "#" cannot be used as starting addresses.

Bulk Dump data which include large amount of data (more than 128 bytes) will sent out in separate packets at an interval of about 40ms. In this case, the subsequent packets may contain the address marked "#."

To send several packets of large DT1 messages at a time, insert intervals of at least 40ms. in between those packets.

<XP-10 (Model ID=7BH) >

● System Setup Parameters

---SYSTEM SETUP: 22byte
---22 * 2 = 44 = 2C (MIDI)
(1)

(1)Transmitted with divide into two; between MSB and LSB.

Address(H)	Size(H)	Description	Number of packets
10 00 00	00 00 2C		
: #		SYSTEM SETUP	1 packet
10 00 2B#			

* System Exclusive receive switch setting is transmitted as ON.
* Device ID Number and CTS/RTS settings are not transmitted.

● User Performance Parameters

---PERFORMANCE ALL: (64 + (16 * 13)) * 64 = 17408byte
(1) (2) (3) (4)
---17408 * 2 = 34816 = 02 10 00 (MIDI)

(1)Size of Parameters common to all parts (2)Number of parts
(3)Size of Parameters for individual parts (4)Number of performances

---PERFORMANCE: 64 + (16 * 13) = 272byte
---272 * 2 = 548 = 04 20 (MIDI)

Address(H)	Size(H)	Description	Number of packets
20 00 00	02 10 00		
: #		PERFORMANCE ALL	272 packets
22 0F 7F #			
20 00 00	00 04 20		
: #		PERFORMANCE 1	5 packets
20 04 1F #			
20 04 20	00 04 20		
: #		PERFORMANCE 2	5 packets
20 08 3F #			
20 08 40	00 04 20		
: #		PERFORMANCE 3	5 packets
20 0C 5F #			
:	:	:	:
22 0B 60	00 04 20		
: #		PERFORMANCE 64	5 packets
22 0F 7F #			

● Performance Temporary Parameters

---TEMPORARY: 64 + (16 * 13) = 272byte
---272 * 2 = 544 = 04 20 (MIDI)

Address(H)	Size(H)	Description	Number of packets
28 00 00	00 04 20		
: #		TEMPORARY	5 packets
28 04 1F #			

● User Tone Parameters

---USER TONE ALL: 10 * 256 = 2560byte
(1) (2)
---2560 * 2 = 2150 = 28 00 (MIDI)

(1)Size of tone edit parameters (2)Number of tones

Address(H)	Size(H)	Description	Number of packets
30 00 00	00 28 00		
: #		USER TONE ALL	40 packets
30 27 7F #			

● User Drum Set Parameters

---USER DRUM ALL: 514 * 20= 10280byte
---10280 * 2 = 20560 = 01 20 50 (MIDI)

Address(H)	Size(H)	Description	Number of packets
38 00 00	01 20 50		
: #		USER DRUM ALL	160 packets
39 20 4F #			

<GS (Model ID=42H) >

● System and Part Parameters

Address(H)	Size(H)	Description	Number of packets
48 00 00	00 1D 10	ALL	
		(All of the System parameters and Part parameters can be sent sequentially.)	
: #			30 packets
48 1D 0F #			
48 00 00	00 00 10		
: #		SYSTEM 1	1 packet
48 00 0F #			
48 00 10	00 01 00		
: #		SYSTEM 2	1 packet
48 01 0F #			
48 01 10	00 01 60		
: #		BLOCK 0	2 packets
48 02 6F #			
48 02 70	00 01 60		
: #		BLOCK 1	2 packets
48 04 4F #			
48 04 50	00 01 60		
: #		BLOCK 2	2 packets
48 06 2F #			
48 06 30	00 01 60		
: #		BLOCK 3	2 packets
48 08 0F #			
48 08 10	00 01 60		
: #		BLOCK 4	2 packets
48 09 6F #			
48 09 70	00 01 60		
: #		BLOCK 5	2 packets
48 0B 4F #			
48 0B 50	00 01 60		
: #		BLOCK 6	2 packets
48 0D 2F #			
48 0D 30	00 01 60		
: #		BLOCK 7	2 packets
48 0F 0F #			
48 0F 10	00 01 60		
: #		BLOCK 8	2 packets
48 10 6F #			
48 10 70	00 01 60		
: #		BLOCK 9	2 packets
48 12 4F #			
48 12 50	00 01 60		
: #		BLOCK A	2 packets
48 14 2F #			
48 14 30	00 01 60		
: #		BLOCK B	2 packets
48 16 0F #			
48 16 10	00 01 60		
: #		BLOCK C	2 packets
48 17 6F #			
48 17 70	00 01 60		
: #		BLOCK D	2 packets
48 19 4F #			
48 19 50	00 01 60		
: #		BLOCK E	2 packets
48 1B 2F #			
48 1B 30	00 01 60		
: #		BLOCK F	2 packets
48 1D 0F #			

● Drum Setup Parameters

m: map number (0 = MAP1, 1 = MAP2)

Address(H)	Size(H)	Description	Number of packets
49 m0 00	00 02 00		
:		PLAY NOTE NUMBER	2 packets
49 m1 7F			
49 m2 00	00 02 00		
:		LEVEL	2 packets
49 m3 7F			
49 m4 00	00 02 00		
:		ASSIGN GROUP NUMBER	2 packets
49 m5 7F			
49 m6 00	00 02 00		
:		PANPOT	2 packets
49 m7 7F			
49 m8 00	00 02 00		
:		REVERB SEND LEVEL	2 packets
49 m9 7F			
49 mA 00	00 02 00		
:		CHORUS SEND LEVEL	2 packets
49 mB 7F			
49 mC 00	00 02 00		
:		Rx. NOTE ON/OFF	2 packets
49 MD 7F			
49 ME 00	00 00 18		
:		DRUM MAP NAME	1 packet
49 ME 17			

■ Section 4. Supplementary material

● Decimal and Hexadecimal table

In MIDI documentation, data values and addresses/sizes of exclusive messages etc. are expressed as hexadecimal values for each 7 bits.
The following table shows how these correspond to decimal numbers.

Dec.	Hex.	Dec.	Hex.	Dec.	Hex.	Dec.	Hex.
0	00H	32	20H	64	40H	96	60H
1	01H	33	21H	65	41H	97	61H
2	02H	34	22H	66	42H	98	62H
3	03H	35	23H	67	43H	99	63H
4	04H	36	24H	68	44H	100	64H
5	05H	37	25H	69	45H	101	65H
6	06H	38	26H	70	46H	102	66H
7	07H	39	27H	71	47H	103	67H
8	08H	40	28H	72	48H	104	68H
9	09H	41	29H	73	49H	105	69H
10	0AH	42	2AH	74	4AH	106	6AH
11	0BH	43	2BH	75	4BH	107	6BH
12	0CH	44	2CH	76	4CH	108	6CH
13	0DH	45	2DH	77	4DH	109	6DH
14	0EH	46	2EH	78	4EH	110	6EH
15	0FH	47	2FH	79	4FH	111	6FH
16	10H	48	30H	80	50H	112	70H
17	11H	49	31H	81	51H	113	71H
18	12H	50	32H	82	52H	114	72H
19	13H	51	33H	83	53H	115	73H
20	14H	52	34H	84	54H	116	74H
21	15H	53	35H	85	55H	117	75H
22	16H	54	36H	86	56H	118	76H
23	17H	55	37H	87	57H	119	77H
24	18H	56	38H	88	58H	120	78H
25	19H	57	39H	89	59H	121	79H
26	1AH	58	3AH	90	5AH	122	7AH
27	1BH	69	3BH	91	5BH	123	7BH
28	1CH	60	3CH	92	5CH	124	7CH
29	1DH	61	3DH	93	5DH	125	7DH
30	1EH	62	3EH	94	5EH	126	7EH
31	1FH	63	3FH	95	5FH	127	7FH

* Decimal values such as MIDI channel, bank select, and program change are listed as one(1) greater than the values given in the above table.
* A 7-bit byte can express data in the range of 128 steps. For data where greater precision is required, we must use two or more bytes. For example, two hexadecimal numbers aa bbH expressing two 7-bit bytes would indicate a value of aa x 128 + bb.
* In the case of values which have a +- sign, 00H = -64, 40H = +- 0, and 7FH = +63, so that the decimal expression would be 64 less than the value given in the above chart. In the case of two types, 00 00H = -8192, 40 00H = +- 0, and 7F 7FH = +8191. For example if aa bbH were expressed as decimal, this would be aa bbH - 40 00H = aa x 128 + bb - 64 x 128.
* Data marked "nibbled" is expressed in hexadecimal in 4-bit units. A value expressed as a 2-byte nibble 0a 0bH has the value of a x 16 + b.

<Example 1> What is the decimal expression of 5AH ?
From the preceding table, 5AH = 90

<Example 2> What is the decimal expression of the value 12 34H given as hexadecimal for each 7 bits?
From the preceding table, since 12H = 18 and 34H = 52
18 x 128 + 52 = 2356

<Example 3> What is the decimal expression of the nibbled value 0A 03 09 0D ?
From the preceding table, since 0AH = 10, 03H = 3, 09H = 9, 0DH = 13
((10 x 16 + 3) x 16 + 9) x 16 + 13 = 41885

<Example 4> What is the nibbled expression of the decimal value 1258?

16) 1258
16) 78 ... 10
16) 4 ... 14
0 ... 4

Since from the preceding table, 0=00H, 4=04H, 14=0EH, 10=0AH, the answer is 00 04 0E 0AH

● Examples of actual MIDI messages

<Example 1> 92 3E 5F
9n is the Note-on status, and n is the MIDI channel number. Since 2H = 2, 3EH = 62, and 5FH = 95, this is a Note-on message with MIDI CH = 3, note number 62 (note name is D4), and velocity 95.

<Example 2> CE 49
CnH is the Program Change status, and n is the MIDI channel number. Since EH = 14 and 49H = 73, this is a Program Change message with MIDI CH = 15, program number 74 (Flute in GS).

<Example 3> EA 00 28
EnH is the Pitch Bend Change status, and n is the MIDI channel number. The 2nd byte (00H=0) is the LSB and the 3rd byte (28H=40) is the MSB, but Pitch Bend Value is a signed number in which 40 00H (= 64 x 128 + 0 = 8192) is 0, so this Pitch Bend Value is
28 00H - 40 00H = 40 x 128 + 0 - (64 x 128 + 0) = 5120 - 8192 = -3072

If the Pitch Bend Sensitivity is set to 2 semitones, -8192 (00 00H) will cause the pitch to change -200 cents, so in this case -200 x (-3072) / (-8192) = -75 cents of Pitch Bend is being applied to MIDI channel 11.

<Example 4> B3 64 00 65 00 06 0C 26 00 64 7F 65 7F
BnH is the Control Change status, and n is the MIDI channel number. For Control Changes, the 2nd byte is the control number, and the 3rd byte is the value. In a case in which two or more messages consecutive messages have the same status, MIDI has a provision called "running status" which allows the status byte of the second and following messages to be omitted. Thus, the above messages have the following meaning.

B3	64 00	MIDI ch.4, lower byte of RPN parameter number	: 00H
(B3)	65 00	(MIDI ch.4) upper byte of RPN parameter number	: 00H
(B3)	06 0C	(MIDI ch.4) upper byte of parameter value	: 0CH
(B3)	26 00	(MIDI ch.4) lower byte of parameter value	: 00H
(B3)	64 7F	(MIDI ch.4) lower byte of RPN parameter number	: 7FH
(B3)	65 7F	(MIDI ch.4) upper byte of RPN parameter number	: 7FH

In other words, the above messages specify a value of 0C 00H for RPN parameter number 00 00H on MIDI channel 4, and then set the RPN parameter number to 7F 7FH.

RPN parameter number 00 00H is Pitch Bend Sensitivity, and the MSB of the value indicates semitone units, so a value of 0CH = 12 sets the maximum pitch bend range to +- 12 semitones (1 octave). (On GS sound sources the LSB of Pitch Bend Sensitivity is ignored, but the LSB should be transmitted anyway (with a value of 0) so that operation will be correct on any device.)

Once the parameter number has been specified for RPN or NRPN, all Data Entry messages transmitted on that same channel will be valid, so after the desired value has been transmitted, it is a good idea to set the parameter number to 7F 7FH to prevent accidents. This is the reason for the (B3) 64 7F (B3) 65 7F at the end.

It is not desirable for performance data (such as Standard MIDI File data) to contain many events with running status as given in <Example 4>. This is because if playback is halted during the song and then rewound or fast-forwarded, the sequencer may not be able to transmit the correct status, and the sound source will then misinterpret the data. Take care to give each event its own status.

It is also necessary that the RPN or NRPN parameter number setting and the value setting be done in the proper order. On some sequencers, events occurring in the same (or consecutive) clock may be transmitted in an order different than the order in which they were received. For this reason it is a good idea to slightly skew the time of each event (about 1 tick for TPQN=96, and about 5 ticks for TPQN=480).

* TPQN : Ticks Per Quarter Note

● Example of an Exclusive message and calculating a Checksum

Roland Exclusive messages (RQ1, DT1) are transmitted with a checksum at the end (before F7) to make sure that the message was correctly received. The value of the checksum is determined by the address and data (or size) of the transmitted exclusive message.

✧ How to calculate the checksum (hexadecimal numbers are indicated by 'H')

The checksum is a value derived by adding the address, size and checksum itself and inverting the lower 7 bits.
Here's an example of how the checksum is calculated. We will assume that in the exclusive message we are transmitting, the address is aa bb ccH and the data or size is dd ee ffH.

aa + bb + cc + dd + ee + ff = sum
sum / 128 = quotient ... remainder
128 - remainder = checksum

<Example 1> Setting REVERB MACRO to ROOM 3

According to the "Parameter Address Map", the REVERB MACRO Address is 40 01 30H, and ROOM 3 is a value of 02H. Thus,

F0	41	10	42	12	40 01 30	02	??	F7
(1)	(2)	(3)	(4)	(5)	address	data	checksum	(6)

(1)Exclusive Status (2)ID (Roland) (3)Device ID (17)
(4)Model ID (GS) (5)Command ID (DT1) (6)End of Exclusive

Next we calculate the checksum.

40H + 01H + 30H + 02H = 64 + 1 + 48 + 2 = 115(sum)
115(sum) / 128 = 0(quotient) ... 115(remainder)
checksum = 128 - 115(remainder) = 13 = 0DH

This means that F0 41 10 42 12 40 01 30 02 0D F7 is the message we transmit.

<Example 2> Requesting transmission of the LEVEL for DRUM MAP 1 NOTE NUMBER 75(D#5; Claves)

NOTE NUMBER 75(D#5) is 4BH in hexadecimal.
According to the "Parameter Address Map", LEVEL of NOTE NUMBER 75(D#5;Claves)in DRUM MAP 1 has an Address of 41 02 4BH and a Size of 00 00 01H. Thus,

F0	41	10	42	11	41 02 4B	00 00 01	??	F7
(1)	(2)	(3)	(4)	(5)	address	size	checksum	(6)

(1)Exclusive Status (2)ID (Roland) (3)Device ID (17)
(4)Model ID (GS) (5)Command ID (RQ1) (6)End of Exclusive

Next we calculate the checksum.

41H + 02H + 4BH + 00H + 00H + 01H = 65 + 2 + 75 + 0 + 0 + 1 = 143(sum)
143(sum) / 128 = 1(quotient) ... 15(remainder)
checksum = 128 - 15(remainder) = 113 = 71H

This means that F0 41 10 42 11 41 02 4B 00 00 01 71 F7 is the message we transmit.

<Example 3> Set "MASTER TUNE" to +23.4cents by System Exclusive

The Address of "MASTER TUNE" is 40 00 00h.The Value should be nibblized data whose resolution is 0.1cents,and which is a signed value
(00 04 00 00H (= 1024) = 0).
+23.4[cents] = 234 + 1024 = 1258 = 04 EAH = 00 04 0E 0AH(nibblized)
Thus,

F0	41	10	42	11	40 00 00	00 04 0E 0A	??	F7
(1)	(2	(3)	(4)	(5)	address	size	checksum	(6)

(1)Exclusive Status (2)ID (Roland) (3)Device ID (17)
(4)Model ID (GS) (5)Command ID (RQ1) (6)End of Exclusive

Next we calculate the checksum.

40H + 00H + 00H + 00H + 04H + 0EH + 0AH = 64 + 0 + 0 + 0 + 4 + 14 + 10 = 92(sum)
92(sum) / 128 = 0(quotient) ... 92(remainder)
checksum = 128 - 92(remainder) = 36 = 24H

This means that F0 41 10 42 11 40 00 00 00 04 0E 0A 24 F7 is the message we transmit.

● About tuning

In MIDI, individual Parts are tuned by sending RPN #1 (Master Fine Tuning) to the appropriate MIDI channel.
In MIDI, an entire device is tuned by either sending RPN #1 to all MIDI channels being used, or by sending a System Exclusive MASTER TUNE (address 40 00 00H).
RPN #1 allows tuning to be specified in steps of approximately 0.012 cents (to be precise, 100/8192 cent), and System Exclusive MASTER TUNE allows tuning in steps of 0.1 cent. One cent is 1/100th of a semitone.
The values of RPN #1 (Master Fine Tuning) and System Exclusive MASTER TUNE are added together to determine the actual pitch sounded by each Part.

Frequently used tuning values are given in the following table for your reference. Values are in hexadecimal (decimal in parentheses).

Hz at A4	cent	RPN #1	Sys.Ex. 40 00 00
445.0	+19.56	4C 43 (+1603)	00 04 0C 04 (+196)
444.0	+15.67	4A 03 (+1283)	00 04 09 0D (+157)
443.0	+11.76	47 44 (+ 964)	00 04 07 06 (+118)
442.0	+ 7.85	45 03 (+ 643)	00 04 04 0F (+ 79)
441.0	+ 3.93	42 42 (+ 322)	00 04 02 07 (+ 39)
440.0	0	40 00 (0)	00 04 00 00 (0)
439.0	- 3.94	3D 3D (- 323)	00 03 0D 09 (- 39)
438.0	- 7.89	3A 7A (- 646)	00 03 0B 01 (- 79)

<Example> Set the tuning of MIDI channel 3 to A4 = 442.0Hz

Send RPN#1 to MIDI channel 3. From the above table, the value is 45 03H.

B2	64 00	MIDI ch.3, lower byte of RPN parameter number	:00H
(B2)	65 01	(MIDI ch.3) upper byte of RPN parameter number	:01H
(B2)	06 45	(MIDI ch.3) upper byte of parameter value	:45H
(B2)	26 03	(MIDI ch.3) lower byte of parameter value	:03H
(B2)	64 7F	(MIDI ch.3) lower byte of RPN parameter number	:7FH
(B2)	65 7F	(MIDI ch.3) upper byte of RPN parameter number	:7FH

● The Scale Tune Feature (address : 40 1x 40)

The scale Tune feature allows you to finely adjust the individual pitch of the notes from C through B. Though the settings are made while working with one octave, the fine adjustments will affect all octaves. By making the appropriate Scale Tune settings, you can obtain a complete variety of tuning methods other than equal temperament. As examples, three possible types of scale setting are explained below.

○ Equal Temperament

This method of tuning divides the octave into 12 equal parts. It is currently the most widely used form of tuning,
especially in occidental music. On XP-10, the default settings for the Scale Tune feature produce equal temperament.

○ Just Temperament (Keytone C)

The three main chords resound much more beautifully than with equal temperament, but this benefit can only be obtained in one key. If transposed, the chords tend to become ambiguous. The example given involves settings for a key in which C is the keynote.

○ Arabian Scale

By altering the setting for Scale Tune, you can obtain a variety of other tunings suited for ethnic music. For example, the settings introduced below will set the unit to use the Arabian Scale.

Example Settings

Note name	Equal	Just Temperament (Keytone C)	Arabian Scale Temperament
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
D#	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F#	0	-10	+43
G	0	+2	-4
G#	0	+14	+47
A	0	-16	0
A#	0	+14	-10
B	0	-12	-49

The values in the table are given in cents. Refer to the explanation of Scale Tuning on page 87 to convert these values to hexadecimal, and transmit them as exclusive data.
For example, to set the tune (C-B) of the Part1 Arabian Scale, send the data as follows:
F0 41 10 42 12 40 11 40 3A 6D 3E 34 0D 38 6B 3C 6F 40 36 0F 50 F7

MULTITIMBRAL SYNTHESIZER — Date : Jun. 16, 1995

Model XP-10 — **MIDI Implementation Chart** — Version : 1.00

Function ...		Transmitted	Recognized	Remarks
Basic	Default	1 – 16	1 – 16	Memorized
Channel	Changed	1 – 16	1 – 16	
Mode	Default	Mode 3	Mode 3	
	Messages	MONO, POLY	Mode 3, 4 (M=1)	*2
	Altered	**********		
Note Number		0 – 120	0 – 127	
	True Voice	**********	0 – 127	
Velocity	Note ON	o	o	
	Note OFF	o	x	
After Touch	Key's	x	o *1	
	Ch's	x	o *1	
Pitch Bend		o	o *1	
Control Change	1 – 31, 64 – 95	o (selectable)	o (selectable) *1	
	0, 32	o *3	o *1	Bank select
	1	o	o *1	Modulation
	5	o	o *1	Portamento time
	6, 38	o *3	o *1	Data entry
	7	o *4	o *1	Volume
	10	o *3	o *1	Panpot
	11	o	o *1	Expression
	64	o	o *1	Hold 1
	65	o	o *1	Portamento
	66	o	o *1	Sostenuto
	67	o	o *1	Soft
	84	o	o *1	Portamento Control
	91	o *4	o (Reverb) *1	Effect 1 depth
	93	o *4	o (Chorus) *1	Effect 3 depth
	98, 99	o *3	o *1	NRPN LSB,MSB
	100, 101	o *3	o *1	RPN LSB,MSB
Prog Change :		o *3	o *1	
	True #	**********	0 – 127	Prog. 1 – 128
System Exclusive		o	o	
System Common	: Song Pos	x	x	
	: Song Sel	x	x	
	: Tune	x	x	
System Real Time	: Clock	x	o	
	: Start	o	o	
	: Continue	x	o	
	: Stop	o	o	
Aux Messages	: All Sounds OFF	o	o (120, 126, 127)	
	: Reset All Controllers	o	o	
	: Local ON/OFF	x	x	
	: All Notes OFF	o	o (123 – 127)	
	: Active Sensing	o	o	
	: Reset	x	x	
Notes		*1 o x is selectable. *2 Recognize as M = 1 even if M≠1. *3 Transmitted when changing Tones or sending Setup data. *4 Transmitted when sending Setup data.		

Mode 1 : OMNI ON, POLY — Mode 2 : OMNI ON, MONO — o : Yes

Mode 3 : OMNI OFF, POLY — Mode 4 : OMNI OFF, MONO — x : No

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Main Specifications

XP-10:Multitimbral Synthesizer
(conforms to General MIDI System and GS Format)

Keyboard

61 keys (with velocity)

Parts

1–16

Maximum Polyphony

28 voices

Effect

Reverb :8 types
Chorus :8 types

Internal Memory

Tones	Preset	:338
	User	:256
Drum sets	Preset	:16
	User	:20
Performances	Preset	:64
	User	:64

Display

16characters, 2lines

Connectors

Output jacks (L, R)
Headphone jack
Pedal jack
(use both as Pedal Switch and Expression Pedal)
MIDI connectors (IN, OUT, THRU)
Computer connector (Mac, PC-1, PC-2, MIDI)

Power Supply

AC 117V, AC 230V or AC240V

Power Consumption

360mA

Dimensions

1034 (W) x 296 (D) x 94 (H) mm
40-3/4" (W) x 11-11/16" (D) x 3-3/4" (H) inches

Weight

5.0Kg/11 lbs 8 oz

Accessories

AC Adaptor	ACI-120 series (117V)
	ACI-220 (230V)
	ACI-240 (E) (240V)
	ACI-240 (A) (240V)
Owner's Manual	

Options

Pedal Switch :DP-2/6, FS-5U (BOSS)
Expression Pedal :EV-5

* In the interest of product development, the specifications and/or appearance of this unit are subject to change without prior notice.

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